



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

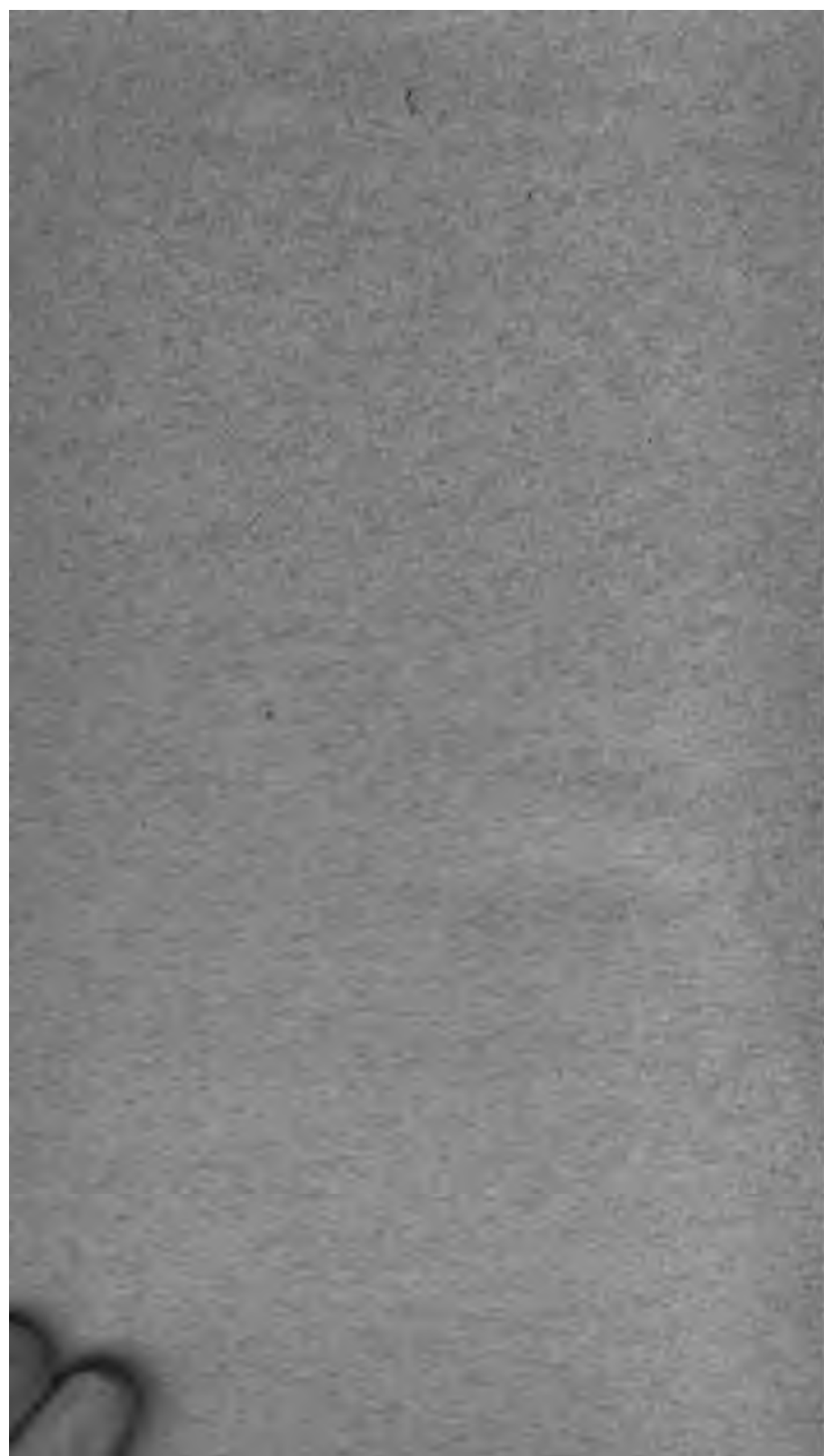
D 1,073,019











Second Report
on the
Hymeniales of Connecticut

By
EDWARD ALBERT WHITE, B.S.
Professor of Floriculture, Massachusetts Agricultural College



HARTFORD
Printed for the State Geological and Natural History Survey
1910

73 a.

Preface

Since the publication of Bulletin No. 3, on the *Hymeniales* of Connecticut, the writer has continued investigations on fleshy and woody fungi, confining his attention more especially, however, to the edible species of the *Agaricaceæ*. The results of the study of this group of plants form the basis of Parts I and II of this report.

In Part I may be found keys to the Connecticut species of *Agaricaceæ*. These keys are based upon the author's observations and notes; but, in some cases where specimens have not been personally collected, original descriptions have been used. Keys to the genera of *Agaricaceæ* may be found on pages 17, 18, 19, and 20, Bulletin No. 3, of the State Geological and Natural History Survey. Descriptions of the genera may also be found in the same Bulletin.

Part II considers in detail the chief characters of some edible species of mushrooms.

Part III consists of a list of species of *Hymeniales* not reported in Bulletin No. 3. Some of these species have been collected by the late Dr. L. F. Underwood and by Dr. F. C. Earle in Redding and vicinity, and these specimens may be found in the Cryptogamic Herbarium of Columbia University at Bronx Park, N. Y. Mr. C. C. Hanmer of East Hartford has continued collecting, and has kindly contributed the results of his work to this report. The writer has collected in Mansfield and vicinity. Fifty-three species not before reported from the state are here listed.

The specimens collected by the writer during the last three years, as well as many of those previously collected, were compared with many type specimens in the Cryptogamic Herbarium of Harvard University. The writer wishes to express his deep appreciation of the assistance given him in this work by Dr. W. G. Farlow and Dr. A. F. Seymour of the Department of Cryptogamic Botany of Harvard University. Several weeks

were spent by the writer in the comparison of specimens, and in consulting the excellent reference books in the University Library and in Dr. Farlow's private collection of literature on fleshy fungi.

The half-tones in this bulletin were made from photographs taken by the author.

Contents

	PAGE
PART I. KEYS TO CONNECTICUT SPECIES OF AGARICACEAE	9
PART II. SOME EDIBLE SPECIES OF AGARICACEAE	29
PART III. LIST OF SPECIES OF FLESHY AND WOODY FUNGI REPORTED SINCE JULY, 1905	57

Part I

Keys to Connecticut Species of
Agaricaceae

AMANITA Pers.

Volva splitting regularly all around, leaving a free border at base of stem; cap naked, or with broad, membranous patches	1
Volva splitting regularly all around, closely embracing the bulbous stem; cap covered with scattered, thick warts	6
Volva broken up into wart-like scales; cap bearing mealy patches which soon disappear, or with small, hard, pointed warts; stem bulbous at first, but bulb soon disappearing	12
1. Gills yellow; cap red or orange, striate on the margin <i>A. Caesarea</i>	
Gills white.....	2
2. Each basidium producing two spores..... <i>A. bisporigera</i>	
Each basidium producing four spores.....	3
3. Cap viscid	4
Cap dry.....	5
4. Volva closely wrapping base of stem, persistent... <i>A. verna</i>	
Volva cup-like around base of stem, often remaining in the soil when plant is collected..... <i>A. phalloides</i>	
5. Stem bulbous; volva split in a circular manner, somewhat closely joined to the stem..... <i>A. mappa</i>	
Stem not bulbous; volva free, fitting closely around the stem; upper margin thin; lower part thick, giving stem a bulbous appearance..... <i>A. spreata</i>	
6. Cap red or yellow.....	7
Cap white, or slightly tinged with yellow.....	9
7. Cap 4 or more inches broad, covered with rough, white or yellow warts; margin slightly striate.... <i>A. muscaria</i>	
Cap small, 1 to 2 inches broad.....	8
8. Margin of cap striate..... <i>A. Frostiana</i>	
Margin of cap not striate..... <i>A. flavoconia</i>	
9. Stem tapering below the bulb into a root-like prolongation	10

- Stem ending abruptly below the bulb..... 11
10. Cap covered with large, pyramidal, hard warts; gills
free from the stem.....*A. strobiliformis*
Cap covered with small, angular, floccose warts; gills
adnexed*A. solitaria*
11. Volva not margined, tapering above into stem; cap
thin*A. candida*
Volva forming a distinct margin which rolls towards
the stem at the edge; cap often tinted with yellow,
fleshy*A. cothurnata*
12. Plants of a distinct red-brown color.....*A. rubescens*
Plants white or yellow-brown..... 13
13. Cap white; bulb large, abrupt.....*A. abrupta*
Cap not white..... 14
14. Cap, volva, ring, and upper part of stem canary-yellow;
stem only slightly bulbous.....*A. flavo-rubescens*
Cap yellow-brown; bulb medium, tapering....*A. velatipes*

AMANITOPSIS Roz.

- Cap covered with thin scales; volva thick, fleshy *A. lepidota*
- Cap not scaly..... 1
1. Cap with warts; volva quickly splitting into thread-
like fragments.....*A. strangulata*
Cap not warty..... 2
2. Cap covered with a mealy substance; volva soon
disappearing*A. farinosa*
Cap smooth; volva persistent..... 3
3. Volva short, cup-shaped; margin of cap only slightly
striate*A. volvata*
Volva long, free from the stem but enclosing it in a
sheath-like manner..... 4
4. Gills white; cap white or mouse-gray.....*A. vaginata*
Gills dingy; cap leaden-brown.....*A. vaginata* var. *livida*

LEPIOTA Fr.

- Surface of stem and cap sticky.....*L. illinita*
Surface of cap and stem dry..... 1
1. Surface of cap smooth, shiny, white.....*L. naucinoides*
Surface of cap scaly or granular..... 2



PLATE I. *Amanita rubescens*. Red Amanita. (Reduced one-third.)
Cap dull red, covered with thin, floccose, gray scales; gills white; stem cylindrical with prominent bulb; volva quickly disappearing.

Neu

55117
C 62

RECEIVED OF BUREAU
MAY 10 1892

State of Connecticut
State Geological and Natural History Survey
BULLETIN No. 14

CATALOGUE
OF THE
FLOWERING PLANTS AND FERNS
OF CONNECTICUT

By
A Committee of the
CONNECTICUT BOTANICAL SOCIETY

BULLETINS
OF THE
State Geological and Natural History
Survey of Connecticut.

1. First Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1903-1904.
2. A Preliminary Report on the Protozoa of the Fresh Waters of Connecticut; by Herbert William Conn.
3. A Preliminary Report on the Hymeniales of Connecticut; by Edward Albert White.
4. The Clays and Clay Industries of Connecticut; by Gerald Francis Loughlin.
5. The Ustilagineæ, or Smuts, of Connecticut; by George Perkins Clinton.
6. Manual of the Geology of Connecticut; by William North Rice and Herbert Ernest Gregory.
7. Preliminary Geological Map of Connecticut; by Herbert Ernest Gregory and Henry Hollister Robinson.
8. Bibliography of Connecticut Geology; by Herbert Ernest Gregory.
9. Second Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1905-1906.
10. A Preliminary Report on the Algæ of the Fresh Waters of Connecticut; by Herbert William Conn and Lucia Washburn (Hazen) Webster.
11. The Bryophytes of Connecticut; by Alexander William Evans and George Elwood Nichols.
12. Third Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1907-1908.
13. The Lithology of Connecticut; by Joseph Barrell and Gerald Francis Loughlin. [Ready shortly.]
14. Catalogue of the Flowering Plants and Ferns of Connecticut growing without cultivation; by a Committee of the Connecticut Botanical Society.

Bulletins 1, 9, and 12 are merely administrative reports, containing no scientific matter. The other bulletins may be classified as follows:

Geology: Bulletins 4, 6, 7, 8, 13.

Botany: Bulletins 3, 5, 10, 11, 14.

Zoölogy: Bulletin 2.

These bulletins are sold and otherwise distributed by the State Librarian. Postage, when bulletins are sent by mail, is as follows: No. 1, \$0.01; No. 2, .07; No. 3, .08; No. 4, .06; No. 5, .03; No. 6, .12; No. 7, .06; No. 8, .05; No. 9, .02; No. 10, .08; No. 11, .07; No. 12, .02; No. 14, .15. The prices, when the bulletins are sold, are as follows (including postage): No. 1, \$0.05; No. 2, .35; No. 3, .40; No. 4, .30; No. 5, .15; No. 6, .50; No. 7, .60*; No. 8, .20; No. 9, .05; No. 10, .35; No. 11, .30; No. 12, .05; No. 14, .75.

Bulletins 1-5 have been collected and bound as Volume I. The price of this volume is \$1.50. Bulletins 6-12 are bound as Volume II. The price of this volume is \$2.45. Other volumes will follow.

It is intended to follow a liberal policy in gratuitously distributing these publications to public libraries, colleges, and scientific institutions, and to scientific men, teachers, and others who require particular bulletins for their work, especially to those who are citizens of Connecticut.

Applications or inquiries should be addressed to

GEORGE S. GODARD,
State Librarian,
Hartford, Conn.

* If map is mounted as a wall map, and sent by express, \$1.60.

CATALOGUE SLIPS.

Connecticut. State geological and natural history survey.

Bulletin no. 14. Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

Connecticut botanical society.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

CATALOGUE SLIPS.

Graves, Charles Burr, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

Eames, Edwin Hubert, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

CATALOGUE SLIPS.

Graves, Charles Burr, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

Eames, Edwin Hubert, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

10

CATALOGUE SLIPS.

Bissell, Charles Humphrey, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

Andrews, Luman, and others.

Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves, E. H. Eames, C. H. Bissell, L. Andrews, E. B. Harger, and C. A. Weatherby, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)

CATALOGUE SLIPS.

Botany.

Connecticut botanical society. Catalogue of the flowering plants and ferns of Connecticut growing without cultivation. By C. B. Graves and others, committee of the Connecticut botanical society. Hartford, 1910.

569 pp., 23^{cm}.

(Bulletin no. 14, Connecticut geological and natural history survey.)



State of Connecticut
PUBLIC DOCUMENT No. 47

**State Geological and Natural
History Survey**

COMMISSIONERS

FRANK BENTLEY WEEKS, Governor of Connecticut (*Chairman*)
ARTHUR TWINING HADLEY, President of Yale University
WILLIAM ARNOLD SHANKLIN, President of Wesleyan University
FLAVEL SWEETEN LUTHER, President of Trinity College (*Secretary*)
CHARLES LEWIS BEACH, President of Connecticut Agricultural College

SUPERINTENDENT
WILLIAM NORTH RICE

BULLETIN No. 14



HARTFORD
Printed for the State Geological and Natural History Survey
1910

Press of The Case, Lockwood & Brainard Company, Hartford, Conn.

CATALOGUE
of the
FLOWERING PLANTS AND FERNS
of
Connecticut
Growing without Cultivation

By

CHARLES BURR GRAVES, A.B., M.D.

EDWIN HUBERT EAMES, M.D.

CHARLES HUMPHREY BISSELL

LUMAN ANDREWS

EDGAR BURTON HARGER, Ph.B., and

CHARLES ALFRED WEATHERBY, A.M.

Committee of the

CONNECTICUT BOTANICAL SOCIETY



HARTFORD

Printed for the State Geological and Natural History Survey

1910

Preface

The project of an accurate and authoritative catalogue of all the plants known to grow without cultivation in Connecticut originated among several enthusiastic botanists who understood the value of records founded upon careful study of the flora in the field as well as in the herbarium. To arouse the widest possible interest in the undertaking the Connecticut Botanical Society was organized in January, 1903, for the chief purpose of accumulating and recording this knowledge, and committees were appointed to gather and collate all available data bearing upon this particular line of research.

The labor of this never-ending investigation had barely begun when the State Geological and Natural History Survey was authorized. Upon the organization of this Survey its superintendent, Prof. William North Rice, sought the coöperation of this Society to report upon the flora. It was realized then as now that the very nature of the subject would require many years of careful study to arrive at an approximately exact knowledge of the distribution of our plants, since parts of the state were little known botanically, while even those areas most carefully worked over furnished frequent surprises.

That the present work is incomplete goes without saying. A work of this character must always be incomplete if for no other reasons than the advent or naturalization, from time to time, of unexpected species, or the hybridization or artificial segregation of some already known. But the opportunity to disseminate existing information is very acceptable at this time, inasmuch as the many evident deficiencies may thus be made apparent to those who can add to our knowledge.

The present volume, treating of the ferns, fern-allies and flowering plants, is intended to include only such species, varieties and named forms as have been critically examined by at least one of the compilers, and which are represented by authentic

specimens in some herbarium. Great effort has been made to insure accuracy in the determination of all doubtful specimens. Some localities, however, rest upon the authority of collectors alone, when the species is once definitely admitted and there is no reason to doubt identity. It has been necessary to exclude a number of species found in previous lists, because of the absence of any authentic specimens. Errors of determination and changes in classification account for a large proportion of such excluded names, while there remain a few that probably really belong to our flora but are waiting to be rediscovered. A list of such excluded plants will be found at the end of the work. There also will be found other data bearing upon the flora as a whole.

In the present unsettled and perplexing state of nomenclature, it is believed that necessity exists for strict adherence to a single standard to avoid still greater confusion. In Gray's Manual, 7th edition, will be found a discriminating application of the rules and usage adopted by the International Botanical Congress, at Vienna, in 1905. This usage has been productive of the least change in plant names, thereby proving particularly well adapted to the purpose of this Catalogue. Moreover, by accepting this Manual as our guide we are enabled to eliminate all descriptive matter by referring the reader to that work. To facilitate general reference, however, important synonymy is given so that there need be little difficulty in coördinating names.*

Common or English names have been given considerable attention, yet it is probable that many others are in use, some, no doubt, by children or others of an observing nature. It is desirable to increase our knowledge of such usage. The same may be said of the folk-lore of our plants and of such traditional knowledge of their medicinal and other uses as has come down to us from earlier generations or from the aborigines.

The data relative to times of flowering and fruiting have been compiled from carefully kept records supplemented by herbarium material, and represent the normal habits of the plants in our region; yet the varying conditions of altitude, exposure, moisture, light, season, etc., have great influence in modifying

* In a few instances we have used, instead of the names given in the 7th edition of the Manual, the names published by the editors of the Manual in a list of emendations in *Rhodora*, vol. 11, no. 123, March, 1909.

plant activities, so that for special localities or seasons the conditions require special consideration. Unless otherwise stated the dates given in the Catalogue indicate the time when the plant is usually in flower, or, for the ferns, when the spores are mature.

The sign \times preceding the name of a species indicates that it is supposed to be of hybrid origin.

All statements indicating the comparative frequency of occurrence of the species are to be considered in relation to allied species and with direct reference to the habitat cited; in other situations the plant may not occur at all or exceptionally. A plant "common" in its habitat should be sufficiently plentiful to be within the observation of all who could recognize it, yet there is a vast difference in the comparative numbers of most really plentiful woody plants and low herbs of the same rating. "Frequent," too, is relative in the same sense. Although, as a rule, frequent or common in the habitat and area cited, many such plants may be rare in, or even absent from, certain intervals where the conditions appear to be equally favorable. "Occasional" needs no explanation. "Rare" is intended to apply to those plants which appear to occur sparingly, usually in but few localities as named. "Local" refers especially to such plants as occur at one or more isolated or special areas, but are there more or less plentiful, as indicated by the context.

The habitats cited are those observed in Connecticut, and although often variable are expressive of local conditions.

In accordance with the spirit of the Act incorporating the Survey, due attention has been given to the economic features of the various species, when required, in notes appended to each. Although in some respects desirable, it seems, on the whole, inadvisable at this time to enter upon a discussion of the associations of native plants and the probable causes leading to such congregations. It is necessary to collect much more complete data than are now available before such discussion can be profitably taken up. Mere lists of such plant aggregates are apt to be of no value to most readers and of little utility to practical botanists.

It is a pleasure to acknowledge the assistance of all who have contributed items of information toward the completeness of this Catalogue and whose names appear throughout the work. Particular mention should be made of Dr. B. L. Robinson and Prof. M. L. Fernald, of the Gray Herbarium of Harvard Uni-

versity, for their very great assistance in determining or verifying many doubtful or critical forms, and for granting the privilege of utilizing the manuscript of the new edition of Gray's Manual. Prof. A. S. Hitchcock and Mrs. Agnes Chase, of the United States Department of Agriculture, have also given aid in certain groups of grasses.

It is hoped that the publication of this Catalogue will stimulate observers and collectors in all parts of the state to contribute every item of information tending to a full knowledge of our plants, either in relation to additional species, distribution, local names, habitat or economic value. Communications may be sent to any member of the committee, at the address given, preferably the one nearest and most convenient, and should be accompanied by specimens of sufficient diagnostic value to determine the identity of each, together with particulars of occurrence, dates, etc. Such specimens, to be of the greatest value for preservation and future reference, should be carefully selected, and may be sent in the fresh state or, preferably, after proper drying under pressure.

C. B. GRAVES, New London,
E. H. EAMES, Bridgeport,
C. H. BISSELL, Southington,
L. ANDREWS, Southington,
E. B. HARGER, Oxford,
C. A. WEATHERBY, East Hartford,

Committee of the Connecticut Botanical Society.

Contents

	Page
Introduction,	11
History,	11
Geology and Physiography,	14
CATALOGUE OF FLOWERING PLANTS AND FERNS,	17
PTERIDOPHYTA,	17
SPERMATOPHYTA,	34
GYMNOSPERMAE,	34
ANGIOSPERMAE,	39
MONOCOTYLEDONEAE,	39
DICOTYLEDONEAE,	137
Appendix,	416
Additions and Corrections,	416
Native Plants not found in recent years,	422
Excluded Species,	423
Fugitive Species,	430
Statistical Summaries,	435
Botanical Authors cited,	442
Index,	465

Introduction.

PART I. HISTORY.

The history of botanical exploration in Connecticut may be said to begin near the end of the second decade of the last century. Previous to this time we have no record of any botanical activity within the state, and if any of the older botanists visited Connecticut it must have been cursorily.

The first resident of Connecticut whose work is of importance seems to have been Dr. Eli Ives, who was born in 1779, and was for many years professor of botany and materia medica in Yale College. He was the author of the species *Gnaphalium decurrens*, which was founded on specimens from New Haven and from "the margin of the Housatonuck about 30 miles from Long Island Sound." He also described as a new species *Asclepias lanceolata* from Cedar Hill, New Haven, which is the plant now known as *Acerates viridiflora* (Raf.) Eaton, var. *lanceolata* (Ives) Gray. Beside this he published notes on *Limosella*, then recently discovered in America. These three articles appeared in 1819 in the first volume of Silliman's Journal, now known as The American Journal of Science. Twelve years later he, in collaboration with Dr. William Tully and Dr. Melines C. Leavenworth, published a "Catalogue of the Phaenogamous Plants, and of the Ferns, growing without cultivation within five miles of Yale College." This is the earliest record of the flora of this well-explored part of the state and contains the names of 1156 species. It was not, however, founded on specimens or even on accurate records, and contains a few species which are not otherwise reported from the state. The foregoing works seem to have comprised the bulk of Dr. Ives' botanical publications and no specimens of his have been seen.

About the time of the publication of Dr. Ives' earliest articles John Pierce Brace must have been making the observations

about Litchfield the results of which he published in 1822 in Silliman's Journal as "A List of Plants growing spontaneously in Litchfield and Vicinity." This earliest extant catalogue of the plants of any portion of Connecticut enumerates 453 species, most or all of which are now known from the same region. Mr. Brace's specimens are said to be preserved at Williams College, but they have not been seen by any member of this Committee.

We are told that Amos Eaton "prosecuted the study of botany, chemistry and mineralogy to some extent in New Haven in 1817." Although we know nothing of the extent of his work on our flora, the record is interesting from the fact that he was the grandfather of Prof. D. C. Eaton and one of the first in America to arouse a general interest in botany.

The earliest collectors whose specimens have been preserved in any quantity belong to a period some years later. Dr. H. C. Beardslee, Dr. J. W. Robbins and Charles Wright collected many rare species during the dozen years following 1822, mostly from 1828 to 1832, some of which have only recently been rediscovered. These gentlemen, although natives of this state, made most of their later collections outside of Connecticut, and some specimens lay for a long time undistributed; so that a few species known to these collectors are here first included in a formal flora of the state.

The next collector whose work is of importance is Prof. Daniel C. Eaton of Yale, who will need no eulogy either as a man or as a scientist to those who were fortunate enough to know him. Although primarily a student of the ferns and other cryptogams, his knowledge of the higher plants was extensive and accurate. He collected much in the region about New Haven and always welcomed reports or specimens of species new to or rare in Connecticut. His collecting, as shown by the dates in his herbarium, began about 1856, and his specimens have been of the greatest assistance both in botanical exploration and in the preparation of this work.

After 1831 work on the flora of Connecticut seems to have lapsed entirely until it was taken up about 1877 by a small group of students in the Sheffield Scientific School of Yale College. The results of their work were published as "A Catalogue of the Flowering Plants and Higher Cryptogams growing without

cultivation within thirty miles of Yale College." This was published by the Berzelius Society and is often referred to as the "Berzelius Catalogue." The limits adopted included less than one-half of the state and a portion of the northern part of Long Island. The presence of a considerable number of species credited to Long Island makes it difficult to determine the precise number of species recorded from this state; but the species and varieties of plants higher than the Bryophyta which are credited to Connecticut number about 1230. The work was prepared with considerable care, but at least a few species were admitted without the evidence of specimens, which caused a few obvious errors as well as some conjectural ones. The idea of this work originated with Dr. George W. Hawes and Dr. T. M. Prudden, but several others assisted in its preparation, notably Prof. Eaton, who later published some additions in the Bulletin of the Torrey Botanical Club.

Not long after this Miss Leonard of Meriden prepared a list of plants growing near Meriden which was published after her death by the Meriden Scientific Association. This enumerated 749 species, while 41 were added by others the next year, making a total of 790. Owing perhaps to the posthumous character of the work it seems never to have had proper revision, and a number of species are included which are not otherwise reported from Connecticut, some of them of such southern range that it does not seem likely that they can belong in a Connecticut list. The lack of specimens prevents the inclusion here of any of these species not reported elsewhere.

In 1882 George R. Case and William A. Setchell published a list of the flora of Norwich and vicinity containing 668 species, and the next year published 100 addenda. A manuscript found among Prof. Eaton's papers gives 99 more for the year 1884, with some corrections, making the total 856.

In 1885 James N. Bishop of Plainville published "A Catalogue of all the Phaenogamous Plants at present known to grow without cultivation in the State of Connecticut." In 1895 a revision was issued which included also the ferns and fern-allies. Additions and corrections were published in 1897 and another new edition issued in 1901. This first catalogue to cover the entire state contained in its first edition 1250 species and varieties,

which number was increased to 1743 in the edition of 1901. Mr. Bishop deserves much credit for his efforts to increase the knowledge of our flora, but his catalogue is rather a compilation of all accessible reports than a critical treatment of the flora of the state, and contains many records the validity of which cannot now be ascertained.

Of late years a large mass of data has been accumulated by the various collectors whose names appear in this work. Some of this has been published in Luman Andrews' "Flora of Meriden Mountain," in Bissell & Andrews' "Flora of Southington," and in Mrs. E. E. Rogers' "Flora of Norwich," as well as in scattered notes and articles by various writers dealing with special localities or species. The bulk of this later material, however, has found its first publication in this present Catalogue.

PART II. GEOLOGY AND PHYSIOGRAPHY. *

The State of Connecticut, measuring roughly one hundred miles from east to west and fifty miles from north to south, has an area of 4990 square miles, of which 145 square miles are covered by water. The three principal rivers, the Thames, the Connecticut and the Housatonic, with their tributaries, drain the interior. As in all glaciated countries, numerous ponds or lakes and swamps are scattered over the surface, and constitute an important feature both from an economic and an æsthetic point of view. According to the Atlas of the U. S. Topographical Survey the state contains 1026 lakes or ponds, and 420 swamps.

With respect to elevation there are three well-marked divisions running parallel with one another across the state from north to south, namely an eastern and a western highland separated by a central lowland area. From sea level the land gradually rises toward the north and northwest. The eastern highland reaches its greatest altitude of 1286 ft. at Bald Hill, in Union, while Bear Mt., in Salisbury, with a height of 2355 ft. marks the highest point of the western highland as well as of the state.

The central lowland is in general a plain, gently rising toward the northern boundary of the state where it is from one to two

* For a very full and admirable account with map, reference is made to Bulletins No. 6 and No. 7 of this Survey.

hundred feet above the level of the sea. It is, however, interrupted by many sharp ridges running chiefly north and south which rise abruptly much above the general level of the plain. Its upper portion as far south as Middletown is traversed by the Connecticut River. Its rock formation is sandstone belonging to the Triassic age, while the sharp ridges referred to are of trap rock and represent ancient eruptions of lava. The highest of these trap ridges is West Peak of the Hanging Hills, near Meriden, which reaches an altitude of 1007 ft. above the sea.

The eastern and western highlands are rugged and hilly, with only comparatively small level areas, and have a crystalline rock formation, being made up for the most part of various kinds of granites, gneisses, schists and limestone. The limestone formation covers a considerable irregular area in the western and north-western parts of the state but is practically absent from other sections.

It is a well-known fact that our wild plants are not evenly distributed over the surface of the country. Some kinds are seen nearly everywhere, others may be abundant in one region but entirely absent from other sections, while still others are found only rarely, and then but very few together. Inquiry into the causes of this unequal distribution reveals a considerable number of factors entering in. One of the most important of these is the chemical constitution of the soil. Rock formations as the source of soils exercise a marked influence upon plant distribution. Many kinds of plants, it is true, are able to grow and seem to thrive equally well upon a variety of soils, but on the other hand there are many species that flourish only upon certain rock formations and the soils produced from them and are rarely if ever found away from such formations. One of our best examples is seen in the case of those species of plants which grow exclusively upon limestone rocks and in soils rich in lime. In like manner seashore plants which grow only in saline soil form a well-marked group. This relation between plant distribution and the chemical constitution of the soil as applied to our Connecticut plants is understood only in its most general features, and there is here good opportunity for research. The problem is much complicated by the fact that Connecticut soils are practically all formed from transported material. Such material, having been

brought by glacial or water agency from a greater or less distance, may be and often is entirely different in chemical composition from the underlying rock. Hence within a small area a variety of soils may be found, while on the other hand soils essentially similar to each other may overlie very different bed-rock formations.

Other influences have an important bearing in this connection. Topographic features correlated with the amount of moisture in the soil and degrees of light and shade affect plant distribution in a marked degree. Thus, the sand plains, the cedar swamps, the trap rock and other precipices and the larger river valleys have their characteristic plants.

There is another small group of species chiefly confined to the southeastern part of the state which belongs to the flora of the Atlantic Coast Plain of the middle and southern states. In the case of these plants, as in that of certain northern plants found within our borders at isolated stations far outside their usual range, it is probable that they represent the shrunk remnants of far larger colonies which grew there in earlier times and under more favorable climatic conditions.

Another agency profoundly influencing the distribution of plants is the fierce unceasing struggle for existence between the various species.

Only a beginning has been made in working out these problems of ecology in their application to our Connecticut flora. They offer a fresh and inviting field for careful research, and it is to be hoped that many observers may soon be interested to undertake the task of supplying the deficiencies of our knowledge in this direction.

Catalogue of Flowering Plants and Ferns.



PTERIDOPHYTA. FERN PLANTS.

POLYPODIACEAE. FERN FAMILY.

POLYPODIUM L. Polypody.

Polypodium vulgare L. (common).

Polypody.

Shaded ledges. Occasional or frequent in northern districts, becoming common near the coast. June — Aug.

The var. *CAMBRICUM* (L.) Willd. has been collected at Stonington (Miss Stanton) and at Cornwall (L. M. Underwood).

The rootstock is medicinal.

PHEGOPTERIS (Presl) Fée. Beech Fern.

Phegopteris polypodioides Fée (Polypodium-like).

Phegopteris Phegopteris Underw.

Long Beech Fern.

Rich moist woods and on shaded banks. Rare or local near the coast, becoming occasional or frequent northward. July.

Phegopteris hexagonoptera (Michx.) Fée (six-angled fern).

Broad Beech Fern.

Rich woods either moist or dry. Occasional near the coast, becoming frequent or common northward. Aug.

This fern is so closely related to *Phegopteris polypodioides* that it is often difficult to decide to which species a given specimen belongs.

Phegopteris Dryopteris (L.) Fée (oak-fern).

Oak Fern.

Rocky woods in rich moist soil. Rare or local over most

of the state: East Lyme (Miss A. M. Ryon), Colchester (Graves), Mansfield (Mrs. C. S. Phelps), East Haddam (Dr. E. J. Thompson), Durham and Monroe (Harger), Meriden (D. C. Eaton), Southington (Andrews), Granby (I. Holcomb), Bridgeport (I. Holden). Occasional or frequent in Litchfield County. Late June—early July.

ADIANTUM L. Maidenhair.

Adiantum pedatum L. (like a bird's foot; referring to the method of division in the fronds).

Maidenhair.

Rich woods. Rare in the immediate vicinity of the coast; occasional or frequent elsewhere. July.

Thrives well in cultivation if placed in a moist, shaded and sheltered location. The plant is medicinal.

PTERIS L. Brake. Bracken.

Pteris aquilina L. (of an eagle; referring to the wing-shaped fronds).

Pteridium aquilinum Kuhn.

Common Brake. Bracken. Brake.

Common. Usually in open ground and poor soils. Aug.

The young shoots are sometimes gathered and eaten in the manner of Asparagus.

CHEILANTHES Sw.

Cheilanthes lanosa (Michx.) Watt (woolly).

Cheilanthes vestita Sw.

Hairy Lip Fern.

Very rare. New Haven, precipitous face of West Rock about half way up the cliff (G. Van Ingen 1892). July.

This is the only known station for this species in New England, and it is supposed to be the northern limit of its growth.

PELLAEA Link. Cliff Brake.

Pellaea atropurpurea (L.) Link (dark purple).

Purple Cliff Brake.

Dry exposed ledges, preferring limestone but occurring also on trap and rarely on gneiss. Bolton, on gneiss (A. V. Osmun); Guilford, on trap (G. H. Bartlett); becoming rare

or local westward and frequent in the limestone district of northwestern Connecticut. July.

The fronds vary greatly in form even on the same plant. The rootstock is medicinal.

CRYPTOGRAMMA R. BR. Rock Brake.

Cryptogramma Stelleri (Gmel.) Prantl.

Pellaea gracilis Hook.

Pellaea Stelleri Watt.

Slender Rock Brake.

Very rare. New Haven, on trap ledges at West Rock (G. Van Ingen); Kent, moist shaded ledges of calcareous rock (Eames & E. H. Austin), and Brookfield, in similar situations (Eames); Salisbury, on limestone (Mrs. C. S. Phelps). July.

WOODWARDIA Smith. Chain Fern.

Woodwardia virginica (L.) Smith.

Virginia Chain Fern.

Wet open swamps, often in Sphagnum. Rare or local in northern districts: South Windsor (A. W. Driggs), Granby (I. Holcomb). Becoming occasional southward and frequent near the coast. July.

Woodwardia areolata (L.) Moore (marked with little areas).

Woodwardia angustifolia Smith.

Net-veined Chain Fern.

Wet or swampy woods. Rare inland: East Hartford (J. F. Smith), Oxford and Middlebury (Harger). Occasional in the vicinity of the coast. Sept.

ASPLENIUM L. Spleenwort.

Asplenium pinnatifidum Nutt. (feather-cleft).

Pinnatifid Spleenwort.

Very rare. Southington, on ledges of shale (H. C. Bigelow); Sharon, on ledges of limestone (E. I. Huntington). July.

Not known from any other New England state.

× **Asplenium ebenoides** R. R. Scott (like the Ebony Spleenwort).

Scott's Spleenwort.

Two plants of this rare species, or more properly hybrid,

have been found in the state. The first was discovered in Canaan by Mr. J. S. Adam in Sept., 1876. Mr. Adam states that the plant flourished there until 1891, then disappeared. A second plant was found in the same town, but at a different station, by Mr. C. K. Averill, in Aug., 1902. Both plants were growing on shaded limestone ledges and with or near the two supposed parent species, *Asplenium platyneuron* and *Camptosorus rhizophyllus*.

Asplenium Trichomanes L. (ancient name for some fern).

Maidenhair Spleenwort.

Shaded ledges. Rather rare along the coast, becoming occasional or frequent northward. July.

Asplenium platyneuron (L.) Oakes (broad-nerved).

Asplenium ebeneum Ait.

Ebony Spleenwort.

Frequent. Dry rocky ground, more often in half-shade. Aug.

The var. **SERRATUM** (E. S. Miller) BSP. (toothed) has been found at Middletown (Bissell), Milford (Eames & C. C. Godfrey), and Huntington (Eames).

Asplenium montanum Willd. (of mountains).

Mountain Spleenwort.

Rare. Crevices of dry, usually overhanging ledges: Scotland (G. Waldo), North Stonington (Fuller & W. E. Setchell, Graves), Franklin and East Haddam (Graves), Beacon Falls (A. W. Evans), Salisbury (Mrs. C. S. Phelps). July.

The last named station represents the northern limit of its range as now known.

Asplenium Ruta-muraria L. (wall-rue).

Rue Spleenwort.

Shaded ledges. Berlin (T. S. Brandegee), Southington (Andrews), Granby (I. Holcomb), Sherman and New Milford (E. H. Austin); and occasional in the limestone district of northwestern Connecticut. Not known from eastern districts or near the coast. July.

Asplenium angustifolium Michx. (narrow-leaved).

Narrow-leaved Spleenwort.

Rare. Moist rich woods: Guilford (W. W. Denslow),

Meriden (D. C. Eaton), Southington (J. N. Bishop), Berlin (H. W. Cowles), Avon (I. Holcomb), Salisbury (F. Rundle).
Aug.

Asplenium acrostichoides Sw. (like *Acrostichum*, a genus of tropical ferns).

Asplenium thelypteroides Michx.

Silvery Spleenwort.

Woods and ravines in moist rich soil. Occasional near the coast, becoming frequent northward. Aug.

Asplenium Filix-femina (L.) Bernh. (female fern).

Lady Fern.

Common. Woods, thickets and fence-rows. Late July — early Aug.

A very variable species with many described forms, some of which seem to be caused by differences in the soil, exposure or habitat. The rootstock is medicinal, and is used as a substitute for that of the Male Fern.

CAMPTOSORUS Link. Walking Leaf.

Camptosorus rhizophyllus (L.) Link (with rooting leaves).

Walking Leaf. Walking Fern.

Shaded ledges, preferring limestone, but growing also on granite, sandstone or trap. Found throughout, but rare or local over most of the state, becoming frequent in the limestone district of northwestern Connecticut. July — Aug.

Plants having the lower auricles of the fronds elongated like the tip have been found at Southington (H. C. Bigelow), Hamden, at Mt. Carmel (D. C. Eaton), and Salisbury (Mrs. C. S. Phelps).

POLYSTICHUM Roth.

Polystichum acrostichoides (Michx.) Schott (like *Acrostichum*, a genus of tropical ferns).

Aspidium acrostichoides Sw.

Dryopteris acrostichoides Kuntze.

Christmas Fern.

Common. Woods and shaded banks or ledges. July.

The var. **INCISUM** Gray (cut or notched), var. *Schweinitzii* Small, *Aspidium acrostichoides* Sw., var. *incisum* Gray,

Dryopteris acrostichoides Kuntze, var. *Schweinitzii* Underw., occurs occasionally. It is found more often late in the season and frequently where the woods have recently been felled. A form with crested fronds occurs at East Haddam (Weatherby).

ASPIDIUM Sw. Wood Fern. Shield Fern.

Aspidium Thelypteris (L.) Sw. (female fern).

Dryopteris Thelypteris Gray.

Marsh Fern.

Common. Swamps and wet ground. Aug.

Often very plentiful and sometimes cut and dried as bedding for stock.

Aspidium simulatum Davenp. (imitating; referring to its resemblance to the Marsh Fern).

Dryopteris simulata Davenp.

Massachusetts Fern.

Wet woods and cedar swamps. Rare over most of the state: Salisbury (Mrs. C. S. Phelps), Oxford (Harger), Southington (Bissell), Cromwell (H. C. Bigelow). Local in New London County (Graves). Aug.

Aspidium noveboracense (L.) Sw. (New York).

Dryopteris noveboracensis Gray.

New York Fern.

Frequent. Woods, more often in moist ground. Aug.

Aspidium marginale (L.) Sw. (on the edge; referring to the position of the fruit dots).

Dryopteris marginalis Gray.

Marginal Shield Fern.

Frequent. Dry rocky woods. July.

The rhizome is officinal and with that of the Male Fern furnishes the drug *Aspidium* or *Filix-mas*. All species of the genus possess the same property in some degree.

Aspidium Goldianum Hook.

Dryopteris Goldiana Gray.

Goldie's Fern.

Rare. Rich moist woods: North Branford (O. Harger), Bloomfield (Miss A. Lorenz), Farmington (I. Holcomb),

Southington (Andrews & Bissell), Cheshire (D. C. Eaton), New Haven (Harger). July.

***Aspidium Boottii* Tuckerm.**

Dryopteris Boottii Underw.

Rare or occasional. Wet woods and shaded swamps, usually growing with *Aspidium cristatum*. July.

Intermediate in form and formerly considered a hybrid between *Aspidium cristatum* and *Aspidium spinulosum*, var. *intermedium*.

***Aspidium cristatum* (L.) Sw. (crested).**

Dryopteris cristata Gray.

Crested Shield Fern.

Occasional or frequent. Wet woods and shaded swamps, more often in sandy soil. July.

A hybrid between this species and *Aspidium marginale* occurs at East Lyme (Miss A. M. Ryon & Graves), Waterford (Graves), Granby (I. Holcomb), and Salisbury (Mrs. C. S. Phelps).

***Aspidium cristatum* (L.) Sw., var. *Clintonianum* D. C. Eaton.**

Dryopteris cristata Gray, var. *Clintoniana* Underw.

Clinton's Shield Fern.

Rare or occasional. Wet woods and shaded swamps. July.

This variety appears to hybridize with *Aspidium marginale* and also with the typical form of the species.

***Aspidium spinulosum* (O. F. Müller) Sw. (with small spines).**

Dryopteris spinulosa Kuntze.

Spinulose Shield Fern.

Moist or wet woods. Usually rare or local but occurring throughout the state. Late June — early July.

This species and its varieties are desirable for cultivation in shaded places and also grow well indoors in the fernery.

***Aspidium spinulosum* (O. F. Müller) Sw., var. *intermedium* (Muhl.) D. C. Eaton (intermediate).**

Dryopteris spinulosa Kuntze, var. *intermedia* Underw.

Occasional or frequent. Moist woods and on shaded rocks. Late June — early July.

Aspidium spinulosum (O. F. Müller) Sw., var. **dilatatum** (Hoffm.) Gray (dilated).

Dryopteris spinulosa Kuntze, var. *dilatata* Underw.

Broad Shield Fern.

This variety is not known in its typical state in Connecticut. The forma **ANADENIUM** Robinson (without glands) apparently occurs at East Hartford (Weatherby), Granby and Barkhamsted (I. Holcomb), and Southington (Andrews, Bissell). It is found growing with the species or with the var. *intermedium* and none of the Connecticut specimens are as characteristic as those from mountainous districts farther north. July.

CYSTOPTERIS Bernh. Bladder Fern.

Cystopteris bulbifera (L.) Bernh. (bulb-bearing).

Filix bulbifera Underw.

Bladder Fern.

Moist rocky woods, wet ledges, meadows and banks of streams. Not reported on the coast or from the eastern and southwestern parts of the state. Rare or local in central districts: Guilford, at North Guilford (G. H. Bartlett), Windsor (H. S. Clark), Simsbury (I. Holcomb), Oxford (Harger). Becoming frequent or common in northwestern Connecticut. July.

Cystopteris fragilis (L.) Bernh. (brittle).

Filix fragilis Underw.

Occasional to frequent. Rich woods, usually in leaf-mold among rocks, sometimes found in old wells. June.

One of the earliest of our ferns to appear in the spring.

WOODSIA R. Br.

Woodsia ilvensis (L.) R. Br. (pertaining to the island Elba). Rusty or Rock Woodsia.

Dry exposed ledges of various rock formations. Rare or local but found in nearly all parts of the state. July.

Woodsia obtusa (Spreng.) Torr. (blunt).

Blunt Woodsia.

Occasional. Woods or half-shade, usually in rocky, rather dry places. July.

DICKSONIA L'Hér.

Dicksonia punctilobula (Michx.) Gray (with small, dotted lobes).

Dicksonia pilosiuscula Willd.

Dennstaedtia punctilobula Moore.

Hay-scented Fern.

Common. Rich woods, fence-rows and hilly pastures, in both moist and dry ground, often forming large colonies. Aug.

The forma **CRISTATA** (Maxon) Clute (crested), and the forma **SCHIZOPHYLLA** Clute (cut-leaved) are both reported to occur rarely with the species.

Sometimes a pest to farmers in rocky pastures, as stock will not eat it and the plant is difficult to eradicate. It grows well in cultivation. Forking fronds are not unusual.

ONOCLEA L.

Onoclea sensibilis L. (sensitive).

Sensitive Fern.

Common. Low fields, swamps and along streams. Sterile June; fertile Sept.

The var. **OBTUSILOBATA*** (Schkuhr) Torr. (with blunt lobes) sometimes occurs. It is apparently an abnormal form caused by cutting or some injury to the earlier growth of the plant.

The sterile fronds are very susceptible to early frost, whence the name.

Onoclea Struthiopteris (L.) Hoffm. (ostrich fern).

Matteuccia Struthiopteris Todaro.

Ostrich Fern.

Rich alluvial soil. Rare in most districts, but frequent along the Connecticut and Housatonic Rivers and their larger tributaries. Sterile June; fertile Aug.—Sept.

Our largest fern, the fronds occasionally reaching six feet in height. It thrives in cultivation if given rich soil, and is often grown for ornament.

SCHIZAEACEAE. CURLY GRASS FAMILY.**LYGODIUM Sw. Climbing Fern.**

Lygodium palmatum (Bernh.) Sw. (branching like the out-spread fingers of a hand).

Creeping Fern. Hartford Fern. Climbing Fern.

Rich woods and thickets, in moist, usually sandy soil: Not reported from western Connecticut; rare in eastern districts: Griswold (Harger & Graves), Lyme (Dr. E. J. Thompson). Local at many stations in the central part of the state. Aug.—Sept.

The following Act was passed by the Legislature and became a law on July 8, 1869: "Any person who shall wilfully and maliciously sever or take from the land of another any of the species of plant known as *Lygodium palmatum* or Creeping Fern growing and being thereon, shall be punished by a fine not exceeding Seven Dollars or imprisonment in county jail not exceeding thirty days or by such fine and imprisonment both at the discretion of the court." The penalty for this offense was later increased. Prior to 1869 this fern was extensively collected and pressed for decorative purposes.

OSMUNDACEAE. FLOWERING FERN FAMILY.**OSMUNDA L. Flowering Fern.**

Osmunda regalis L. (royal).

Royal Fern. Flowering Fern.

Frequent or common. Low thickets, wet meadows and pastures and along streams. June.

The rootstock is medicinal.

Osmunda Claytoniana L.

Interrupted Fern.

Frequent or common. Old pastures, along fence-rows and in open wood-lands. Fertile May; sterile June.

The var. **DUBIA** A. J. Grout (doubtful) occurs occasionally. It is apparently a form caused by some injury to the plant.

All our species of *Osmunda* thrive in cultivation.

Osmunda cinnamomea L. (cinnamon-colored).

Cinnamon Fern.

Common. Wet woods, swamps and boggy ground. Fertile May; sterile June.

Both the var. *FRONDOSA* Gray (leafy) and the var. *INCISA* J. W. Huntington (notched) sometimes occur.

The abundant tomentum found on this species is used in nest building by certain birds.

**OPHIOGLOSSACEAE. ADDER'S TONGUE
FAMILY.**

OPHIOGLOSSUM L. Adder's Tongue.

Ophioglossum vulgatum L. (common).

Adder's Tongue.

Moist meadows, woods and low pastures. Rare or local though perhaps more plentiful than usually supposed as the plant is very inconspicuous. July.

BOTRYCHIUM Sw. Moonwort. Grape Fern.

Botrychium simplex E. Hitchc. (simple).

Botrychium tenebrosum A. A. Eaton.

Rare. Rich woods either dry or moist: Granby (I. Holcomb), Oxford (J. & O. Harger), Goshen (L. M. Underwood), New Milford (J. Pettibone). June.

Botanists disagree as to the proper treatment of this species and our plants need further study.

Botrychium lanceolatum (Gmel.) Angstr. (lance-shaped), var. *angutisegmentum* Pease & Moore (with narrow segments).

Botrychium lanceolatum of Manuals.

Rare. Moist rich woods, usually in leaf-mold: Norwich (W. A. Setchell), East Lyme (Miss A. M. Ryon), Windsor (Weatherby), Granby (I. Holcomb), New Haven and Oxford (Harger), Orange (O. Harger), Naugatuck and Stratford (Eames), Winchester (Bissell), Goshen (L. M. Underwood), Easton (L. N. Johnson), Salisbury (Mrs. C. S. Phelps). Late June — early July.

This species seems to mature its spores two or three weeks later than *Botrychium ramosum* when the two grow together.

Botrychium ramosum (Roth) Aschers. (having many branches).

Botrychium matricariaefolium Braun.

Botrychium neglectum Wood.

Rich woods. Rare or local, but found throughout the state. June.

Small forms of this are difficult to separate from *Botrychium simplex*.

Botrychium obliquum Muhl. (oblique).

Botrychium ternatum Sw., forma *obliquum* Milde.

Grape Fern.

Occasional or frequent. Meadows, woods and old pastures in either dry or moist ground. Sept.

The var. *ELONGATUM* Gilbert & Haberer (elongated), and the var. *DISSECTUM* (Spreng.) Clute (finely cut), *Botrychium dissectum* Spreng., are occasional, growing with the typical form.

Botrychium ternatum (Thunb.) Sw. (three-parted), var. *intermedium* D. C. Eaton (intermediate).

Botrychium obliquum Muhl., var. *intermedium* Underw.

Botrychium ternatum Sw., var. *australe* D. C. Eaton.

'Rare. Rich woods: Union and Southington (Bissell), West Hartford (Harger), Granby (I. Holcomb), Meriden (Andrews), New Milford (C. K. Averill & E. H. Austin), North Canaan (M. B. Tobey). Sept. A small form of this approaching in appearance *Botrychium obliquum*, var. *oneidense* occurs at Granby (I. Holcomb), Plainville (Andrews), and Plymouth (Bissell).

Botrychium virginianum (L.) Sw.

Rattlesnake Fern.

Occasional or frequent. Moist rich woods. June.

The fruiting fronds are occasionally forked, and bear two, three or four fertile panicles.

MARSILEACEAE.

MARSILEA L.

Marsilea quadrifolia L. (four-leaved).

Local. Plentiful in Bantam Lake, Litchfield, its only known native habitat in North America. It has been intro-

duced and thrives in a pond at Cromwell (C. C. Hanmer), and in Lake Whitney, Hamden. Aug.

EQUISETACEAE. HORSETAIL FAMILY.

EQUISETUM L. Horsetail. Scouring Rush.

Equisetum arvense L. (of cultivated ground).

Common Horsetail.

Common. Sandy soil either dry or moist. Varies greatly according to season or habitat and several forms have been described. Fertile May; sterile June.

The plant is medicinal. It is said to be dangerously poisonous to horses when cut with hay.

Equisetum pratense Ehrh. (of meadows).

Rare. Moist sandy alluvium on the banks of the Housatonic River: Oxford (Eames & Harger), Newtown (Harger). Fertile May; sterile June—July.

This resembles the preceding species and may have been overlooked by other collectors.

Equisetum sylvaticum L. (growing in woods).

Occasional or local. Moist places and in wet ground about springs. Fertile May; sterile June—July.

Equisetum palustre L. (of marshes).

Rare. Wet meadows along the Connecticut River or on its banks: Lyme (Graves), East Windsor (Bissell). June.

Equisetum fluviatile L. (of a river).

Equisetum limosum L.

Pipes.

Shallow water and wet meadows along streams. Frequent along our rivers and larger streams but rare or local elsewhere. Fertile May; sterile June—Aug.

Equisetum hyemale L. (lasting over the winter), var. *intermedium* A. A. Eaton (intermediate).

Scouring Rush.

Rare. Growing on railroad embankments: Hartford (H. S. Clark), Norfolk (Bissell & H. S. Clark). May—June.

Equisetum hyemale L., var. **affine** (Engelm.) A. A. Eaton (allied).

Equisetum hyemale of Manuals, mainly.

Scouring Rush. Shave Grass.

Frequent. Sandy soil, usually in moist but sometimes in dry places. May.

The siliceous stems were formerly much used for scouring and polishing. The plant is medicinal.

Equisetum variegatum Schleich. (variegated), var. **Jesupi** A. A. Eaton.

Equisetum variegatum of Manuals in part.

Rare. Alluvial soil along the Housatonic River: Canaan (J. W. Robbins), Salisbury (A. W. Evans, Mrs. C. S. Phelps), Cornwall (H. S. Clark & Bissell). May—June.

Equisetum scirpoides Michx. (like *Scirpus*, the Bulrush).

Rare or local. Rich woods, usually on moist hillsides: Norfolk (J. W. Robbins), Canaan (H. S. Clark & Bissell), Sharon and Cornwall (A. V. Osmun). May—June.

LYCOPODIACEAE. CLUB MOSS FAMILY.

LYCOPODIUM L. Club Moss.

Lycopodium Selago L. (classical name for this species).

Rare. In a cool shaded ravine near New Haven (J. A. Allen, 1879). Sept.

Has been found at Mt. Holyoke, Mass., and should be looked for at intermediate localities among our trap hills.

Lycopodium lucidulum Michx. (slightly shining).

Occasional. Damp mossy woods, usually in deep shade. Sept.

Lycopodium inundatum L. (subject to flooding).

Rare or local. Open bogs, usually in sandy soil. Aug.—Sept.

The var. **BIGELOVII** Tuckerm., *Lycopodium adpressum* Lloyd & Underwood in part, occurs at Voluntown (Harger), Groton (Graves), East Lyme (Miss A. M. Ryon & Graves), New Haven (D. C. Eaton), Milford (Eames).

***Lycopodium annotinum* L. (of a year).**

Rare or local. Base of trap dyke, in moist soil, North Branford (G. H. Bartlett), and in similar situations, Durham (Harger). Wet cold woods: Cromwell (F. K. Hallock), Winchester (Andrews & Bissell), Norfolk (J. H. Barbour), Redding (L. N. Johnson), Salisbury (Mrs. C. S. Phelps). July — Aug.

***Lycopodium clavatum* L. (club-shaped).**

Running Pine. Common Club Moss.

Occasional. Dry woods or sometimes in moist ground. Sept.

The var. *MONOSTACHYON* Grev. & Hook. (single-spiked) is rare or local: East Lyme (Miss A. M. Ryon), Franklin (R. W. Woodward), Stafford (Dr. E. J. Thompson & Weatherby), Simsbury (I. Holcomb, B. B. Bristol & Bissell), Southington (Andrews), Wolcott (Andrews & Bissell), Norfolk (J. H. Barbour), Salisbury (Mrs. C. S. Phelps).

The spores of this and other species are medicinal and are officinal. They also possess peculiar mechanical properties.

***Lycopodium obscurum* L. (obscure).**

Tree Club Moss.

Woods and old pastures, both dry and moist. Frequent near the coast, becoming rare northward. Sept.

***Lycopodium obscurum* L., var. *dendroideum* (Michx.) D. C. Eaton (tree-like).**

Tree Club Moss.

Woods and pastures. Frequent northward, becoming rare near the coast. Sept.

***Lycopodium complanatum* L. (flattened), var. *flabelliforme* Fernald (fan-form).**

Lycopodium complanatum of American authors in part.

Ground Pine. Christmas Green.

Common. Woods and pastures, more often in sandy soil. Sept.

Well known and much used for Christmas decorations.

***Lycopodium tristachyum* Pursh (three-spiked).**

Lycopodium complanatum L., var. *Chamaecyparissus* Milde.

Occasional. Sandy woods, either dry or moist. July — Aug.

SELAGINELLACEAE.

SELAGINELLA Beauv.

Selaginella rupestris (L.) Spring (growing on rocks).

Occasional. Dry exposed ledges, or sometimes on barren soil. Aug.—Sept.

Selaginella apus (L.) Spring (footless; i. e., without a stalk).

Frequent. Moist open or half-shaded ground, usually in meadows and pastures or about springs. July — Aug.

ISOËTACEAE. QUILLWORT FAMILY.

ISOËTES L. Quillwort.

Isoëtes Tuckermanni A. Br.

Rare or local. Growing submerged on gravelly shores of ponds: Ledyard, North Stonington and East Lyme (Graves), Lyme (Graves & Bissell). July — Aug.

Isoëtes foveolata A. A. Eaton (minutely pitted).

Rare. Meriden, edge of small pond near West Peak (F. W. Hall, 1873). Aug.

Isoëtes saccharata Engelm. (sugary), var. **Amesii** A. A. Eaton.

Rare. Shallow water of ponds and rivers: Griswold (Harger), North Stonington (Graves & Bissell), Ledyard and Lyme (Graves). July — Aug.

Isoëtes echinospora Dur. (prickly-spored), var. **Braunii** (Dur.) Engelm.

Occasional. Shallow water or muddy borders of ponds and streams. July — Sept.

Isoëtes echinospora Dur., var. **muricata** (Dur.) Engelm. (beset with short, hard points).

Rare. Groton, in Great Brook (Graves). July — Sept.

Forms approaching this have been found at Union (Bissell), and at Lyme (Graves & Bissell).

Isoëtes Gravesii A. A. Eaton.

Local. Muddy border of ponds and streams: Lyme (Graves), Windsor (Bissell), East Haven (W. A. Setchell), Bristol (J. N. Bishop), Plymouth (H. S. Clark & Bissell),

Oxford and Huntington (Harger), Stratford (Eames), Goshen (L. M. Underwood). Aug.—Sept.

Isoëtes Dodgei A. A. Eaton.

Isoëtes canadensis A. A. Eaton.

Isoëtes riparia Engelm., var. *canadensis* Engelm.

Rare or local. Windsor, muddy river bank (Bissell), Fairfield, in Mill River, and Westport, in Saugatuck River (Eames). July — Sept.

Isoëtes Engelmanni A. Br.

Occasional. Muddy border of ponds and streams, growing where it would be submerged during high water. July -- Sept.

The var. *GRACILIS* Engelm. (slender) has been found at Groton (Graves), Southington (Bissell), Bridgeport and Westport (Eames).

SPERMATOPHYTA. SEED PLANTS.

GYMNOSPERMAE.

TAXACEAE. YEW FAMILY.

TAXUS L. Yew.

Taxus canadensis Marsh.

Taxus minor Britton.

Ground Hemlock. American Yew.

Rocky woods, often under other evergreens. Rare or wanting along the coast, reaching Norwich (Mrs. E. E. Rogers), Guilford, at North Guilford (G. H. Bartlett), Orange (D. C. Eaton), Danbury (Eames); becoming occasional or frequent northward. April—May; fruit July—Aug.

The pulp of the fruit is edible, but all other parts of the plant are poisonous. Drinking a decoction of the leaves has caused death to man, and birds are said to be sometimes poisoned by eating the seeds.

PINACEAE. PINE FAMILY.

PINUS L. Pine.

Pinus Strobus L. (classical name for some pine tree).

White Pine.

Woodlands, in various soils and exposures. Occasional near the coast, becoming frequent northward and common in northeastern Connecticut. May—June.

A well known and valuable timber tree; often planted for ornament and for wind-breaks. The bark is medicinal.

Pinus rigida Mill. (stiff).

Pitch Pine. Yellow Pine.

Poor, sterile or sandy soils. Rare or local in Litchfield County, frequent elsewhere. May—June.

Usually a small tree, but sometimes growing larger, then yielding a hard resinous lumber.

***Pinus sylvestris* L. (of woods).**

Scotch Pine. Scotch Fir.

Rare or local. Fields, roadsides and woods as an escape from cultivation: New London (Graves), Lyme (Harger & Graves), Southington (Andrews & Bissell), Bridgeport (Eames). May. Native of Europe and Asia.

One of the valuable timber trees of Europe. It thrives in our climate and was formerly often planted. It is of little value as an ornamental tree, but if grown in sufficient quantity might be valuable for timber.

***Pinus resinosa* Ait. (resinous).**

Red Pine.

Rare or local. Rocky woods: Granby (I. Holcomb), Salisbury (Mrs. C. S. Phelps). May—June.

The most beautiful of our native pines and a valuable ornamental tree. One of the timber trees of northern New England.

LARIX Mill. Larch.***Larix laricina* (DuRoi) Koch (larch-like).**

Larix americana Michx.

Tamarack. Hackmatack. American or Black Larch.

Swamps and bogs. Absent near the coast. Rare in the eastern part of the state: Union (Bissell), Tolland (Graves). Becoming occasional westward and frequent in Litchfield County. May.

The wood is hard, strong, durable in contact with the soil, valuable for posts and railroad ties. The bark is medicinal.

***Larix decidua* Mill. (falling in season).**

Larix europaea DC.

European Larch.

Rare. Escaped from cultivation to roadsides, fields and waste ground: Thompson and Union (Bissell), Griswold (Graves), Southington (Andrews & Bissell), Bridgeport (Eames). April—May. Native of northern Europe.

Hardy in almost any location and also producing a valuable timber. A good tree to plant for wind-breaks.

PICEA Link. Spruce.**Picea canadensis** (Mill.) BSP.*Picea alba* Link.

Cat Spruce. Skunk Spruce. White Spruce.

Rare. Waterford, a few trees in a pasture as an escape from cultivation (Graves). May. Native in northern New England and farther north.

A good tree for ornamental planting.

Picea rubra (DuRoi) Dietr. (red).*Picea nigra* Link, var. *rubra* Engelm.

Red Spruce.

Rare. Cool woods and bogs: Litchfield (N. L. Britton), Canaan (J. H. Putnam), Salisbury (Mrs. C. S. Phelps). May.

Picea mariana (Mill.) BSP.*Picea nigra* Link.*Picea brevifolia* Peck.

Black Spruce. Bog Spruce.

Swamps and sphagnum bogs. Rare or local over most of the state but absent near the coast. Usually a small stunted tree 5 to 15 ft. high but growing much larger in the cool swamps of Litchfield County. In open bogs the trees often produce cones when not more than 5 ft. high, and the cones persist on the tree for many years. May.

Northward the lumber is much used in the manufacture of wood pulp. It is the principal source of spruce gum. Medicinal.

Picea Abies (L.) Karst. (like Abies, the Fir).*Picea excelsa* Link.

Norway Spruce.

Rare or local. Roadsides, fields and woods as an escape from cultivation: Norwich (Mrs. E. E. Rogers), Southington (Andrews), Oxford (Harger), Bridgeport (Eames), Norwalk and Wilton (Miss A. E. Carpenter). May. Native of northern Europe.

Extensively planted for ornament and also for wind-breaks.

ABIES Hill. Fir.**Abies balsamea** (L.) Mill. (producing balsam).

Balsam Fir. Balm-of-Gilead Fir.

Rare. Cold swamps and woods: Middlebury (Harger), Goshen (J. H. Putnam & Bissell), Cornwall (E. E. Brewster), Salisbury (Mrs. C. S. Phelps). Also occurs as an escape from cultivation at Woodstock (Weatherby), Andover (Mrs. C. S. Phelps), and Farmington (Miss A. Lorenz). May.

The wood is soft and weak, of little value as timber. Its habit of early losing its lower branches makes it less desirable for ornamental planting than some other species of evergreens. Canada balsam is derived from the resin of its trunk.

TSUGA (Endl.) Carr. Hemlock.**Tsuga canadensis** (L.) Carr.

Hemlock.

Usually frequent but rather local in its distribution. Rocky woods and on hillsides in both dry and wet situations. May.

The timber is coarse-grained and brittle, but is used for rough lumber. The bark is much used in tanning. A valuable tree in cultivation for hedges and wind-breaks, and when standing alone a desirable ornamental tree. Medicinal.

CHAMAECYPARIS Spach. Cypress. White Cedar.**Chamaecyparis thyoides** (L.) BSP. (like *Thya*, classical name for some fragrant tree).*Chamaecyparis sphaeroidea* Spach.

White Cedar.

In swamps. Rare in western and central districts: Danbury and New Fairfield (P. M. Augur et al.), Wolcott (A. M. Johnson). Becoming occasional or frequent eastward. April.

A slender tree with light and durable wood very valuable for fence posts. It usually grows in dense colonies, choking out other vegetation and forming cedar swamps.

THUJA L. Arbor Vitae.**Thuja occidentalis** L. (western).

Arbor Vitae. White Cedar.

Rare. Canaan, on a limestone ridge and in a near-by swamp (C. K. Averill), Salisbury, rocky hillside and at another locality in a deep swamp (Mrs. C. S. Phelps); apparently native at these three localities. Escaped from cultivation to fields and roadsides at Norwich (Mrs. E. E. Rogers), East Hartford (A. W. Driggs), Killingly and Windsor (Bissell). April — May.

Often planted for hedges or as an ornamental tree. A valuable timber tree in northern New England. Medicinal, the fresh tops officinal.

JUNIPERUS L. Juniper.

***Juniperus communis* L.** (growing in colonies).

Common Juniper.

Rare. Norwich, near Spaulding's Pond (Mrs. E. E. Rogers). May.

***Juniperus communis* L., var. *depressa* Pursh** (sunk down, as if flattened from above).

Juniperus nana of Britton's Manual in part.

Juniperus communis L., var. *canadensis* Loud.

Juniperus communis L., var. *alpina* Gray's Manual ed. 6 in part.

Common Juniper.

Frequent. Dry rocky pastures and sterile hills. May.

The fruit often does not ripen until the second summer. The oil of juniper, distilled from the fruit, is officinal. This is medicinal, as are the tops or young branches, and is also an essential constituent of Holland gin.

***Juniperus virginiana* L.**

Red Cedar. Savin.

Common. Dry or sterile soils. April — May.

The wood is light, very durable in contact with the soil, and much used for fencing. It is also used for boat building and cabinet work. The so called "cedar-apples" found on its branches are sometimes used medicinally, and are causative of rust on apple trees.

ANGIOSPERMAE.

MONOCOTYLEDONEAE.

TYPHACEAE. CAT-TAIL FAMILY.

TYPHA L. Cat-tail Flag.

***Typha latifolia* L.** (broad-leaved).

Common Cat-tail.

Frequent. Wet swamps, margins of streams and ponds, often in large colonies. June—July; fruit Oct., persisting through the winter.

The heads are often used for decorative purposes and also make a fluffy stuffing for pillows, etc. The roots are sometimes used medicinally.

***Typha angustifolia* L.** (narrow-leaved).

Cat-tail.

Occasional in fresh-water marshes near the coast, also found inland at Oxford (Harger), and Salisbury (Mrs. C. S. Phelps); common along the coast in salt or brackish marshes. June; fruit Oct., persisting through the winter.

SPARGANIACEAE. BUR-REED FAMILY.

SPARGANIUM L. Bur-reed.

***Sparganium eurycarpum* Engelm.** (broad-fruited).

Borders of ponds and streams. Rare or local over most of the state: Groton and Lyme (Graves), East Hartford (A. W. Driggs), Oxford (Harger), Windsor and Sharon (Bissell). Becoming occasional along the coast in New Haven and Fairfield Counties (Eames). July — Aug.

***Sparganium americanum* Nutt.**

Sparganium simplex Huds., var. *Nuttallii* Engelm.

Rare or occasional. Shallow water and borders of ponds and streams: Voluntown and East Lyme (Graves), Union (Bissell), Hampton (Weatherby). July — Aug.

Sparganium americanum Nutt., var. **androcladum** (Engelm.)

Fernald & A. J. Eames (having the staminate inflorescence branched).

Sparganium androcladum Morong.

Sparganium simplex Huds., var. *androcladum* Engelm.

Occasional or frequent. Marshes, about ponds and along streams. July — Aug.

Sparganium lucidum Fernald & A. J. Eames (shining).

Rare. Shallow water of pool, Hartford (H. S. Clark & Weatherby). Late Aug.—Sept.

Sparganium diversifolium Graebner (various-leaved).

Sparganium simplex Gray's Manual ed. 6 in great part.

Occasional. Borders of ponds and streams. July — Aug.

Sparganium diversifolium Graebner, var. **acaule** (Beeby)

Fernald & A. J. Eames (stemless).

Rare. Wet places with the typical form. July — Aug.

Sparganium angustifolium Michx. (narrow-leaved).

Sparganium simplex Huds., var. *angustifolium* Engelm.

Rare. Floating in deep water: Canaan (J. W. Robbins, 1828). July — Aug.

Sparganium fluctuans (Morong) Robinson (undulating).

Sparganium androcladum Morong, var. *fluctuans* Morong, at least in part.

Sparganium simplex Huds., var. *fluitans* Engelm.

Rare. Deep water of cold ponds: Norfolk (J. W. Robbins). July — Aug.

Sparganium minimum Fries (least; smallest).

Rare. Shallow water and mud of Twin Lakes, Salisbury (Mrs. C. S. Phelps, A. V. Osmun & Bissell). July — Aug.

NAJADACEAE. PONDWEED FAMILY.

POTAMOGETON L. Pondweed.**Potamogeton natans** L. (floating).

In ponds and slow streams. Rare or local over most of the state: Southington (Andrews & Bissell), Oxford (Harger), Salisbury (Mrs. C. S. Phelps, A. V. Osmun & Bissell). Frequent in New London County (Graves). July — Aug.

Potamogeton Oakesianus Robbins.

Rare. In ponds: Stafford (E. L. Morris), Middlebury (Harger). Aug.

Potamogeton epihydrus Raf. (living on the water).

Potamogeton Nuttallii C. & S.

Potamogeton pennsylvanicus Willd.

Common. Ponds and slow or swift running streams.
June — Aug.

Potamogeton epihydrus Raf., var. *cayugensis* (Wiegand) Benn.

Potamogeton Nuttallii C. & S., var. *cayugensis* Wiegand.

Rare. Lyme, in Selden's Cove (Graves & Bissell), Hamden, in Lake Whitney (Eames). July — Aug.

Potamogeton alpinus Balbis (alpine).

Potamogeton rufescens Schrad.

Rare. Plainville, in cold spring water near Hamlin's Pond (Andrews & Bissell). July — Aug.

Potamogeton americanus C. & S.

Potamogeton lonchites Tuckerm.

Potamogeton fluitans Gray's Manual ed. 6, not Roth.

Local. In the Connecticut River and adjoining coves and creeks at Lyme (Graves); also at New Haven (D. C. Eaton), Hartford (J. W. Robbins, A. W. Driggs), Westport, in the Saugatuck River; also in the Housatonic River near its mouth and at New Milford (Eames), and at Oxford (Harger). July — Sept.

Potamogeton americanus C. & S., var. *novaeboracensis* (Morong) Benn.

Potamogeton lonchites Tuckerm., var. *novaeboracensis* Morong.

Rare. Lyme, in deep water at Selden's Cove (Graves & Bissell). July — Aug.

Potamogeton pulcher Tuckerm. (beautiful; handsome).

Rare. In ponds: East Lyme, Old Lyme and Lyme (Graves), Bridgeport (Eames). June — July.

Potamogeton amplifolius Tuckerm. (large-leaved).

Occasional. Ponds and sluggish streams. July — Aug.

Potamogeton heterophyllus Schreb. (various-leaved).

Occasional or local. Ponds and either slow or swift flowing streams. July — Aug.

The forma *GRAMINIFOLIUS* (Fries) Morong (grassy-leaved) occurs at Lake Saltonstall (O. D. Allen). The forma *LONGIPEDUNCULATUS* (Mérat) Morong (long-stalked) has been found at Selden's Cove, Lyme (Graves). The forma *MYRIOPHYLLUS* (Robbins) Morong (myriad-leaved) occurs at Lake Saltonstall (O. D. Allen), and Twin Lakes, Salisbury (Bissell). The forma *MAXIMUS* Morong (greatest) has been found in the Connecticut River at East Windsor (Bissell), and in Lake Whitney, Hamden (O. D. Allen). The forma *TERRESTRIS* Schlecht. (terrestrial) is often found along borders of ponds and streams in dry seasons.

Potamogeton angustifolius Berchtold & Presl (narrow-leaved).

Rare. Oxford, in the Housatonic River (Harger). July — Aug.

The var. *CONNECTICUTENSIS* (Robbins) Benn., *Potamogeton lucens* L., var. *connecticutensis* Robbins, occurs rarely in ponds, lakes and rivers: Lake Saltonstall (J. W. Robbins); in the Housatonic River at New Milford (E. H. Austin & Eames) and Kent (C. K. Averill); also in Twin Lakes, Salisbury (Bissell).

Potamogeton lucens L. (shining).

Rare. Ponds and slow streams: Lyme, at Selden's Cove (Graves), Meriden (Harger), Salisbury (Bissell). July — Aug.

Potamogeton praelongus Wulf. (very long).

Local. Deep water of ponds and streams: North Branford and Wallingford (Harger), Lake Saltonstall (J. A. Allen), Westport and Kent (Eames), Litchfield (Dr. T. Morong), Canaan (J. W. Robbins). June — July.

Potamogeton Richardsonii (Benn.) Rydb.

Potamogeton perfoliatus L., var. *lanceolatus* Robbins.

Potamogeton perfoliatus L., var. *Richardsonii* Benn.

Common. Ponds and streams. June — July.

Potamogeton bupleuroides Fernald (like *Bupleurum*, the Thorough-wax).

Potamogeton perfoliatus Gray's Manual ed. 6 in part, not L.

In ponds, streams and brackish waters. Occasional near the coast, extending inland as far as East Windsor (Bissell).
July — Aug.

× **Potamogeton nitens** Weber (shining).

Rare. Old Saybrook, small pond near the Connecticut River (Harger). This is apparently a hybrid between *Potamogeton heterophyllus* and some other species, and is not known to produce fruit.

Potamogeton zosterifolius Schum. (having leaves like *Zostera*, the Eel Grass).

Rare or occasional. Ponds and streams. July — Aug.

Potamogeton Hillii Morong.

Rare. Salisbury, in Twin Lakes (Bissell). July — Aug.

Potamogeton obtusifolius Mert. & Koch (blunt-leaved).

Rare. Newtown, in shallow water of a mill pond (Eames).
July — Aug.

Potamogeton Friesii Ruprecht.

Potamogeton mucronatus Gray's Manual ed. 6, not Schrad. (?).

Rare. Southington, in pools (Andrews). July — Aug.

Potamogeton pusillus L. (very small).

Frequent. Ponds and slow streams. July — Sept.

Potamogeton pusillus L., var *Sturrockii* Benn.

Rare. In ponds: Waterford (Graves), Lake Saltonstall (O. D. Allen). July — Sept.

Potamogeton lateralis Morong (lateral).

Rare. Collected at Salisbury many years ago by Dr. J. W. Robbins; not reported by any recent collector. July — Aug.

Potamogeton Vaseyi Robbins.

Rare. Ponds and lakes: Lake Saltonstall (O. D. Allen, J. A. Allen, Eames), Milford (Eames), Plymouth (J. K. Goodrich). July — Aug.

Potamogeton gemmiparus Robbins (producing buds).

Rare. Union, shallow water of Mashapaug Pond (Bissell). July — Aug.

Potamogeton foliosus Raf. (leafy).

Potamogeton pauciflorus Pursh.

Rare or local. Ponds and slow streams: Voluntown (Harger), Southington (Andrews & Bissell), Newtown (Eames), New Milford (C. K. Averill), Sharon and Salisbury (Bissell). July — Aug.

Potamogeton hybridus Michx. (mongrel).

Potamogeton diversifolius Raf.

Occasional. In ponds. July — Aug.

The var. MULTI-DENTICULATUS (Morong) Asch. & Graebner (with many fine teeth) has been found at Groton (T. Morong), Griswold (Harger), Milford and Stratford (Eames).

Potamogeton dimorphus Raf. (of two forms).

Potamogeton Spirillus Tuckerm.

Frequent. Ponds and streams. June — Aug.

Floating leaves often wanting.

Potamogeton pectinatus L. (comb-like).

Rare or local. Ponds, streams and ditches: Hartford (D. C. Eaton), East Windsor and Salisbury (Bissell), Oxford (Harger), Stratford, New Milford and Kent (Eames). July — Sept.

Potamogeton Robbinsii Oakes.

Occasional or local. Ponds, ditches and slow streams. July — Aug.

This species very rarely forms fruit.

RUPPIA L. Ditch Grass.**Ruppia maritima** L. (of the sea-coast).

Ditch Grass.

Frequent in shallow water of pools, creeks and ditches about salt or brackish marshes along the coast. July — Oct.

ZANNICHELLIA L. Horned Pondweed.**Zannichellia palustris** L. (of marshes).

Horned Pondweed.

Occasional in salt or brackish water along the coast, and in the Housatonic River northward as far as New Milford (C. K. Averill). July — Sept.

ZOSTERA L. Grass Wrack. Eel Grass.

Zostera marina L. (of the sea).

Eel Grass.

Common along the coast in bays, salt rivers and creeks, growing on muddy or sandy bottoms. July — Sept.

Extensively used by farmers as a fertilizer.

NAJAS L. Naiad.

Najas flexilis (Willd.) Rostk. & Schmidt (flexible).

Frequent. Ponds and slow streams. July — Sept.

Najas gracillima (A. Br.) Magnus (very slender).

Najas indica Cham., var. *gracillima* A. Br.

Rare or local. In ponds: East Lyme and Lyme (Graves), Stafford (Bissell), Milford, Bridgeport and Newtown (Eames), Danbury (Eames & C. C. Godfrey). July — Sept.

JUNCAGINACEAE. ARROW GRASS FAMILY.

SCHEUCHZERIA L.

Scheuchzeria palustris L. (of marshes).

Rare. Cool sphagnum bogs: South Windsor (Weatherby), Burlington (J. N. Bishop), East Granby (M. Hitchcock), Bethany and Woodbury (Harger), Litchfield (A. L. Train), Salisbury (Mrs. C. S. Phelps & Bissell). June — July.

TRIGLOCHIN L. Arrow Grass.

Triglochin maritima L. (of the sea).

Frequent in salt marshes along the coast. June — Aug.

ALISMACEAE. WATER PLANTAIN FAMILY.

SAGITTARIA L. Arrow-head.

Sagittaria longirostra (M. Micheli) J. G. Smith (long-beaked).

Rare. Groton, swampy border of pond (Harger). July — Sept.

Sagittaria latifolia Willd. (broad-leaved).

Sagittaria variabilis Engelm.

Frequent or common. Marshes and shallow water of ponds and streams. Aug.—Sept.

The forma **OBTUSA** (Muhl.) Robinson (blunt), *Sagittaria obtusa* Muhl., is occasional; the forma **HASTATA** (Pursh) Robinson (halberd-shaped), *Sagittaria hastata* Pursh, and the forma **GRACILIS** (Pursh) Robinson (slender), *Sagittaria gracilis* Pursh, are frequent. The forma **DIVERSIFOLIA** (Engelm.) Robinson (various-leaved), *Sagittaria variabilis* Engelm., var. *diversifolia* Engelm., is rare.

Sagittaria Engelmanniana J. G. Smith.

Sagittaria variabilis Engelm., var. *gracilis* Engelm.

Rare. Bogs and wet meadows: Waterford, Voluntown and East Lyme (Graves), Lyme (Dr. E. J. Thompson). Aug.—Sept.

Sagittaria arifolia Nutt. (arum-leaved).

Sagittaria cuneata Sheldon.

Rare. Wet alluvial soil on the banks of the Connecticut River: Windsor and Hartford (Bissell). June—July.

Sagittaria heterophylla Pursh (various-leaved).

Rare or local. Muddy river shores: Norwich (W. A. Setchell), Lyme (Graves), Wethersfield (C. Wright), East Windsor (Bissell), Windsor (H. S. Clark), Hartford (H. S. Clark & Bissell), Bloomfield (A. W. Driggs), Seymour and Derby (Harger). June—July.

The var **RIGIDA** (Pursh) Engelm. (stiff), *Sagittaria rigida* Pursh, and the var. **ELLIPTICA** Engelm. (oval) sometimes occur with the species.

Sagittaria graminea Michx. (grass-like).

Sagittaria Eatoni J. G. Smith.

Sagittaria cristata Engelm.

Occasional or local. Muddy shores of ponds and streams. June—Aug.

Sagittaria subulata (L.) Buchenau (awl-shaped).

Sagittaria pusilla Nutt.

Sagittaria natans Michx., var. *lorata* Chapm.

Rare or local. Lyme, muddy shore of Selden's Cove (Dr. E. J. Thompson) ; mud of lower Housatonic River and smaller streams along the coast in Fairfield County (Eames). July — Sept.

Sagittaria subulata (L.) Buchenau, var. (?) **gracillima** (Wats.) J. G. Smith (very slender).

Sagittaria natans Michx., var. (?) *gracillima* Wats.

Rare. East Windsor and Windsor, rock ledges in the bed of the Connecticut River, in 3-6 ft. of water (Bissell). July.

LOPHOTOCARPUS Th. Durand.

Lophotocarpus spongiosus (Engelm.) J. G. Smith (spongy).

Sagittaria calycina Engelm., var. *spongiosa* Engelm.

Muddy tidal shores and meadows. Rare at Old Lyme (Graves) and New Haven (D. C. Eaton, Harger) ; occasional, Milford and westward (Eames). June — Sept.

ALISMA L. Water Plantain.

Alisma Plantago-aquatica L. (water-plantain).

Water Plantain.

Common. Muddy places and shallow water. July — Aug.

HYDROCHARITACEAE. FROG'S BIT FAMILY.

ELODEA Michx. Water-weed.

Elodea canadensis Michx.

Philotria canadensis Britton.

Ditch Moss.

Frequent. Ponds and slow streams. July — Sept.

Sometimes so plentiful as to be a nuisance in reservoirs.

VALLISNERIA L. Tape Grass. Eel Grass.

Vallisneria spiralis L. (coiled).

Eel Grass. Wild Celery.

Common in the waters of the Connecticut and Housatonic Rivers and their larger tributaries. It also grows in Hatch Pond, Kent (Eames), and in the Thames River at Norwich (W. A. Setchell, Mrs. E. E. Rogers). July — Sept.

GRAMINEAE. GRASS FAMILY.

ZEAL. Corn.

Zea Mays L. (Indian name for this species).

Corn. Indian Corn. Maize.

Rare. A fugitive in waste grounds and on dumps or banks of streams. July — Aug. Nativity unknown but supposed to be from Mexico.

One of the most important cereals of the United States.

TRIPSACUM L. Gama Grass. Sesame Grass.

Tripsacum dactyloides L. (finger-like).

Gama Grass. Sesame Grass.

Moist or dry open ground bordering salt or brackish marshes and creeks. Groton (Graves) and occasional along the coast westward. July — Aug.

A large corn-like grass, sometimes used for fodder in the South.

ANDROPOGON L. Beard Grass.

Andropogon scoparius Michx. (broom-like).

Broom Beard Grass. Wire Grass. Bunch Grass. Blue-stem.

Common. Open sterile ground, often covering large areas on the sand plains. Aug.—Sept. A glaucous form is frequent.

A dry wiry grass of little agricultural value in Connecticut, but notable for its beautiful color in autumn and winter. In the South and West it is considered of some value for pasturage.

Andropogon scoparius Michx., var. *littoralis* (Nash) Hitchc. (of the sea-shore).

Andropogon littoralis Nash.

Rare. Fairfield, sparingly on Fairfield Beach (Eames). Aug.—Sept.

Andropogon virginicus L.

Dry or moist open ground. Rare or local inland, becoming occasional near the coast. Late Aug.—Sept.

Andropogon furcatus Muhl. (forked).

Forked Beard Grass. Big Blue-stem. Turkey-foot.

Frequent. Open ground, generally in dry soil. Aug.—Sept.

A tall and striking grass, growing in large clumps. It is of value for hay and pasturage in some localities in the United States.

SORGHASTRUM Nash.

Sorghastrum nutans (L.) Nash (nodding).

Sorghastrum avenaceum Nash.

Chrysopogon nutans Benth.

Chrysopogon avenaceus Benth.

Indian Grass. Wood Grass.

Occasional or frequent. Open, usually dry ground. Aug.—Sept.

A tall grass, growing in clumps and with beautiful golden brown flower-panicles.

SORGHUM Pers. Broom Corn. Sorghum.

Sorghum halepense (L.) Pers.

Johnson Grass.

Rare. Waterbury, in waste ground (A. E. Blewitt). Aug.—Sept. Fugitive from the Old World. A cultivated form of this called Kaffir Corn has been found in waste ground at Hartford (H. S. Clark).

This species is supposed to be the original of the several forms of Sorghum which are cultivated for sugar-making, for use in the manufacture of brooms, for forage and for their seeds.

DIGITARIA Scop. Finger Grass.

Digitaria filiformis (L.) Koeler (thread-shaped).

Panicum filiforme L.

Syntherisma filiformis Nash.

Frequent. Dry sterile open ground. Aug.—Sept.

Digitaria humifusa Pers. (spread over the ground; prostrate).

Panicum glabrum Gaudin.

Syntherisma linearis Nash.

Small Crab Grass.

Occasional or frequent. Dry or moist fields, roadsides and waste places. Aug.—Sept. Naturalized from Europe.

• **Digitaria sanguinalis** (L.) Scop. (blood-red).

Panicum sanguinale L.

Syntherisma sanguinalis Dulac.

Syntherisma fimbriata Nash.

Crab Grass. Large Crab Grass. Finger Grass. Crowfoot Grass.

Common. Waste places and cultivated ground. July—Oct. Naturalized from Europe.

A troublesome weed in gardens and lawns. It makes good hay if properly dried, and in the South is often harvested. In Bohemia the seeds are used by man as a food.

LEPTOLOMA Chase.

Leptoloma cognatum (Schultes) Chase (related).

Panicum autumnale Bosc.

Fall Witch Grass.

Rare. New Haven, in dry ground and in gravelly soil (R. W. Woodward). July.

PASPALUM L.

Paspalum setaceum Michx. (bristle-like).

Fields and pastures, mostly in dry ground. Rare in the northern part of the state, becoming occasional near the coast.

A form with glabrous spikelets sometimes occurs. Aug.—Sept.

Paspalum Muhlenbergii Nash.

Frequent or common. Dry open ground. Aug.—Sept.

Paspalum psammophilum Nash (sand-loving).

Paspalum prostratum Nash, not Scribn. & Merr.

Rare. Dry sandy or gravelly soil: Sprague (Graves), Franklin (R. W. Woodward), Old Saybrook (Bissell & Graves). Aug.—Sept.

Paspalum plenipilum Nash (having many hairs).

Rare. Orange, in meadows (R. W. Woodward). Sept.

Paspalum circulare Nash (round).

Rare. Groton, moist grassland (Bissell & Graves), Franklin (R. W. Woodward). Sept.

PANICUM L. Panic Grass.

A large genus, made up for the most part of lowly grasses of little or no agricultural value, but of much scientific interest.

Panicum verrucosum Muhl. (warty).

Rare. New Haven, in damp shaded ground (Harger).
Sept.—Oct.

Panicum capillare L. (hair-like).

Old-witch Grass. Tumble-weed. Tickle Grass.

Common. Cultivated ground and waste places. July—
Sept.

Panicum philadelphicum Bernh.

Panicum minus Nash, according to description.

Panicum minimum Scribn. & Merr.

Dry woods and thickets and on sandy shores of ponds and rivers. Rare in New London County (Graves); occasional in southwestern Connecticut (Eames); extending up the Connecticut River as far as East Windsor (Bissell). Aug.—
Sept.

Panicum miliaceum L. (millet).

Common, True, European or Broom Corn Millet.

Rare or occasional. Roadsides and waste places in and about towns and cities. Aug.—Sept. Fugitive or adventive from Europe.

The seeds are highly nutritious and are used in some countries as human food; also in domestic medicine. The grain is excellent for feeding poultry. In the Old World it has been cultivated from prehistoric times.

Panicum dichotomiflorum Michx. (having its flower-stalks forked in pairs).

Panicum proliferum of American authors, not Lam.

Occasional or frequent. Chiefly in moist ground, especially on borders of ponds and rivers. Aug.—Sept.

Panicum amaroides Scribn. & Merr. (like *Panicum amarum*).

Panicum amarum Ell., var. *minor* Vasey & Scribn.

Sea beaches and sand dunes. Rare or local on the coast eastward: Old Lyme (Graves), Guilford (Dr. Barratt). Becoming occasional along the Sound westward. Aug.—Oct.

***Panicum virgatum* L. (wand-like).**

Switch Grass. Tall Panic Grass.

In either moist or dry ground. Common along the coast and the larger rivers, rare or occasional elsewhere. July — Sept.

A handsome grass forming large, dense clumps and with ample flower panicles sometimes 30 inches long. If cut early it makes a fair quality of hay and it is also of some value as a forage plant.

***Panicum longifolium* Torr. (long-leaved).**

Rare or local. Open moist ground near the coast: Groton and Montville (Graves), Fairfield (Eames). Aug. — Sept.

***Panicum agrostoides* Spreng. (like *Agrostis*, the Red Top).**

Common. Low meadows and wet open grounds. July — Sept.

***Panicum stipitatum* Nash (stalked).**

Rare. Lyme, wet meadow at Selden's Cove (Graves & Bissell). Aug.

***Panicum depauperatum* Muhl. (impoverished).**

Frequent. Dry sterile or sandy ground. June — early July.

***Panicum linearifolium* Scribn. (narrow-leaved).**

Panicum Enslinei of Britton's Manual.

Common. Dry fields and in sandy or sterile places. June — early July.

***Panicum Werneri* Scribn.**

Rare or local. Chiefly in open, dry, sandy or gravelly soil, sometimes in thickets or open sandy woods: Vbluntown, Ledyard and Waterford (Graves), Franklin (R. W. Woodward & Graves). June — July.

***Panicum Bicknellii* Nash.**

Panicum nemopanthum Ashe.

Panicum Bushii Nash.

Rare. Rocky woodlands: Norwich (Graves), New Haven (R. W. Woodward). June.

***Panicum dichotomum* L. (forked in pairs).**

Frequent or common. Dry woods and thickets. June — July.

***Panicum barbulatorum* Michx.** (having a little beard).

Occasional. Rocky woods and thickets usually in dry soil.

June—July.

***Panicum microcarpon* Muhl.** in Ell. (small-fruited).

Panicum barbulatorum of American authors, not Michx.

Frequent. Low moist or wet thickets and open places.

June—July.

***Panicum boreale* Nash** (northern).

Open bogs, wet meadows and moist sandy thickets. Apparently rare in southern Connecticut: Griswold and Waterford (Graves), Franklin (R. W. Woodward & Graves), Southington (Andrews, Bissell), Oxford and Monroe (Harger). Probably occasional in the northern part of the state.

June—July.

***Panicum spretum* Schult.** (despised).

Panicum nitidum of recent American authors, not Lam.

Panicum Eatoni Nash.

Rare. Low meadows and sandy shores of ponds: Groton and East Lyme (Graves), Columbia (Weatherby & Mrs. C. S. Phelps). June—July.

***Panicum Lindheimeri* Nash.**

Panicum nitidum Scribn. & Merr. in part.

Dry sterile open ground. Occasional or frequent in southeastern and southwestern Connecticut, apparently rare elsewhere: East Hartford (Weatherby), Southington (Andrews). June—July.

***Panicum huachucae* Ashe.**

Panicum unciphyllum of recent American authors, not Trin.

Panicum pubescens of Britton's Manual.

Common. Fields, woods and thickets usually in dry or sandy places. June—July.

***Panicum huachucae* Ashe, var. *silvicola* Hitchc. & Chase** (living in woods).

Panicum lanuginosum of recent American authors in part.

Occasional or frequent. Woods and shaded ground in either dry or wet soil. June—July.

Panicum implicatum Scribn. (entangled).

Panicum unciphyllum Trin., var. *implicatum* Scribn. & Merr.

Swamps and in wet sandy places. Rare in most parts of the state, but occasional in southwestern Connecticut. June — July.

Panicum meridionale Ashe (southern).

Panicum filiculme Ashe, not Hack.

Panicum unciphyllum Trin., var. *meridionale* Scribn. & Merr.

Rare or occasional. Dry or sterile soil in woods or in open ground. June — July.

Panicum oricola Hitchc. & Chase (an inhabitant of the shore.)

Rare. Barren sands along the shore of the Sound: Groton (Bissell). Probably occurring at other points on the coast. June — Aug.

Panicum subvillosum Ashe (somewhat hairy).

Rare. Dry sandy ground: Tolland and Southington (Bissell), East Hartford (Weatherby). June — July.

Panicum tennesseense Ashe.

Occasional or frequent. Woods and shaded ground more often in moist soil. June — July.

Panicum albemarlense Ashe.

Panicum auburne Gray's Manual ed. 7 in part.

Rare. Dry sandy woods: Waterford, at Fog Plain (Graves). June — July.

Panicum scoparioides Ashe (like *Panicum scoparium*).

Rare. Woods or half shade in dry gravelly soil: Southington (Bissell). June — July.

Panicum pseudopubescens Nash (simulating *Panicum pubescens*).

Panicum ovale Gray's Manual ed. 7 in part.

Rare. Southbury, alluvial ground on banks of the Pomperaug River (Harger). June — July.

Panicum villosissimum Nash (very hairy).

Panicum atlanticum Nash.

Panicum xanthospermum Scribn. & Mohr.

Panicum haemacarpon Ashe.

Rare. Dry rocky woods and hillsides or in meadows:

Franklin (Graves, R. W. Woodward), Old Lyme (Graves), East Hartford (Weatherby), Southington (Andrews), Southbury (Harger). June — July.

***Panicum Commonsianum* Ashe.**

Rare. Dry sandy or gravelly soil: East Lyme (Graves), South Windsor (Weatherby). June.

***Panicum Addisonii* Nash.**

Rare. Sandy plains: East Lyme (Graves), East Hartford (Weatherby). June.

***Panicum tsugetorum* Nash (of hemlocks).**

Occasional or frequent. Dry fields and woods. June — July.

***Panicum columbianum* Scribn.**

Panicum psammophilum Nash.

Occasional or frequent. Dry sandy fields and thickets. June — July.

***Panicum sphaerocarpon* Ell. (round-fruited).**

Frequent to common. Fields, pastures and roadsides in dry ground. June — Aug.

***Panicum Ashei* Pearson.**

Panicum commutatum Scribn. & Merr., not R. & S.

Rare or occasional. Dry, often rocky woods. June — July.

***Panicum Scribnerianum* Nash.**

Panicum scoparium Gray's Manual ed. 6, not Lam.

Common. Dry open sterile ground. June — July.

***Panicum xanthophysum* Gray (having yellow bladders; referring to the yellowish fruit).**

Rare. Dry open woods or sandy places: Stafford (Graves), South Windsor (H. J. Koehler & A. W. Driggs). July — Aug.

***Panicum clandestinum* L. (concealed).**

Corn Grass. Deer-tongue Grass.

Common. Moist or dry soil in open or partly shaded places. June — July.

Panicum Boscii Poir.

Panicum Porterianum Nash.

Panicum latifolium of American authors, not L.

Rare or occasional. Dry rocky woodlands. June — July.

Panicum Boscii Poir., var. *molle* (Vasey) Hitchc. & Chase (soft).

Panicum latifolium L., var. *molle* Vasey.

Panicum pubifolium Nash.

Dry woods and thickets, usually in rocky ground. Occasional or local near the coast, becoming rare inland. June — July.

Panicum latifolium L. (broad-leaved).

Panicum macrocarpon Le Conte.

Occasional or frequent. Woods and thickets, mostly in dry ground. June — Aug.

ECHINOCHLOA Beauv.**Echinochloa crusgalli** (L.) Beauv. (cock-spur).

Panicum crusgalli L.

Barnyard Grass. Corn Grass. Cockspur or Cocksfoot Grass.

Common. Cultivated ground, mostly in manured soil, waste places and banks of streams. July — Sept. Naturalized from Europe.

Sometimes troublesome as a weed in cultivated ground, but useful as a forage plant and for the silo.

Echinochloa frumentacea (Roxb.) Link (producing grain).

Japanese Barnyard Millet or Grass. Billion-Dollar Grass.

Rare. Escaped from cultivation to fields and roadsides: Southington (Andrews), Salisbury (Mrs. C. S. Phelps). July — Sept. Fugitive from the Old World.

In cultivation as a forage plant. In India it is grown under the name of Sowna Millet for its grain which is there used as human food.

Echinochloa Walteri (Pursh) Nash.

Panicum crusgalli L., var. *hispidum* Torr.

Panicum Walteri Pursh.

Ditches, marshes and river banks. Occasional or frequent

along the coast and the larger streams ; rare elsewhere. July — Sept.

SETARIA Beauv. Bristly Foxtail Grass.

Setaria imberbis R. & S. (beardless), var. **perennis** (Hall) Hitchc. (perennial).

Chaetochloa versicolor Bicknell.

Perennial Foxtail Grass.

Occasional or frequent on the coast on borders of salt marshes. Aug.— Sept.

Setaria glauca (L.) Beauv. (glaucous).

Chaetochloa glauca Scribn.

Ixophorus glaucus Nash.

Foxtail. Pigeon Grass. Twitch Grass.

Common. Cultivated ground and waste places. July — Sept. Naturalized from Europe.

Often a troublesome weed in gardens.

Setaria verticillata (L.) Beauv. (whorled).

Chaetochloa verticillata Scribn.

Ixophorus verticillatus Nash.

Rough Foxtail Grass.

Rare or local. Roadsides and waste places in towns and cities. July — Sept. Naturalized from Europe.

Setaria viridis (L.) Beauv. (green).

Chaetochloa viridis Scribn.

Ixophorus viridis Nash.

Green Foxtail. Bottle Grass.

Frequent to common. Cultivated ground and waste places. June — Aug. Naturalized from Europe.

A weed in gardens and cultivated fields.

Setaria italica (L.) Beauv.

Chaetochloa italica Scribn.

Ixophorus italicus Nash.

Common, Italian or German Millet. Hungarian Grass.

Rare or occasional. Escaped from cultivation to roadsides and waste places. Aug.— Sept. Adventive from Europe.

The var. **GERMANICA** (Mill.) Richter, Golden-Wonder Millet, occurs rarely.

Often grown for fodder. In the Old World from ancient times grown for human food.

CENCHRUS L. Sandbur.

Cenchrus carolinianus Walt.

Cenchrus tribuloides of American authors, not L.
Sandbur. Hedgehog or Bur Grass.

Local, frequent or common. Dry sandy or gravelly fields and waste ground. July — Aug.; fruit Aug. — Sept.

Sometimes a troublesome weed.

ZIZANIA L. Water or Indian Rice.

Zizania palustris L. (of marshes).

Zizania aquatica of Manuals, not L.
Wild Rice. Water Oats.

Local or frequent. Shallow water of tidal rivers and large streams, especially near the coast; sometimes in ponds as at Hatch Pond, Kent (Eames). July — Aug.; fruit Sept. — Oct.

A highly ornamental grass. The seeds are very nutritious, and are said to be superior to the Oriental rice. They are greedily eaten by ducks and other birds; also extensively gathered for food by the Indians of the Northwest and sold by them in the markets.

LEERSIA Sw. White Grass. Cut Grass.

Leersia virginica Willd.

Homalocenchrus virginicus Britton.
Cut Grass. Scratch Grass.

Frequent. Wet woods, swamps and moist places. Aug.

Leersia oryzoides (L.) Sw. (like *Oryza*, the Rice).

Homalocenchrus oryzoides Poll.

Rice Cut Grass. Scratch Grass. False Rice.

Frequent. Swamps, along streams and in ditches. Aug. — Sept.

It makes a fair quality of hay.

PHALARIS L. Canary Grass.

Phalaris canariensis L.

Canary Grass.

Rare or occasional. Roadsides and waste places. June — Oct. Fugitive or adventive from Europe.

The seeds are used as food for cage birds, and mixed with wheat or rye are also used in some countries for bread making.

Phalaris arundinacea L. (reed-like).

Reed Canary Grass. Sword Grass. Spires Grass.

In swamps and along streams. Rare or occasional in the western part of the state; becoming frequent eastward. June—July.

The var. *PICTA* L. (painted), Ribbon Grass, is a horticultural form often cultivated for ornament, and it sometimes escapes to roadsides and waste places. The variety is introduced from Europe.

A striking grass adapted for planting in wet ground.

ANTHOXANTHUM L. Sweet Vernal Grass.

Anthoxanthum odoratum L. (fragrant).

Sweet Vernal Grass.

Common. Roadsides, fields, meadows, borders of woods and in waste places. May—June. Native of Europe.

Very fragrant in drying. Used in basket making.

HIEROCHLOË R. Br. Holy Grass.

Hierochloë odorata (L.) Wahlenb. (fragrant).

Hierochloë borealis R. & S.

Savastana odorata Scribn.

Savastana Nashii Bicknell.

Vanilla or Seneca Grass.

Rare or occasional inland: Franklin (R. W. Woodward), Southington (Andrews), Southbury (Eames & Harger), Sherman (Eames & E. H. Austin), Salisbury (Mrs. C. S. Phelps). Becoming frequent about the borders of salt and brackish marshes along the coast. May—June.

A very fragrant grass, used by the Indians in basket making. In northern Europe this and other sweet-scented grasses are strewn before the church doors on Saints' days.

ORYZOPSIS Michx. Mountain Rice.

Oryzopsis pungens (Torr.) Hitchc. (sharp-pointed).

Oryzopsis canadensis of Gray's Manual ed. 6.

Oryzopsis juncea BSP.

Rare. Dry woodlands: Voluntown (R. W. Woodward),

Preston (Graves), Thompson (Harger), Stafford (Weatherby & Bissell). May.

Oryzopsis asperifolia Michx. (rough-leaved).

Rocky woods. Rare near the coast and in the southwestern part of the state; occasional or frequent in central and northern Connecticut. May—June.

Oryzopsis racemosa (Sm.) Ricker (racemose).

Oryzopsis melanocarpa Muhl.

Rocky woods. Rare in the southeastern part of the state, frequent in southwestern Connecticut, occasional elsewhere. July—Aug.

STIPA L. Feather Grass.

Stipa avenacea L. (oat-like).

Black Oat Grass. Needle Grass. Porcupine Grass.

Reported only near the coast, in dry and rocky woods or openings and dry, sandy soils. Occasional in the southeastern part of the state, rare or local near New Haven, becoming more frequent in southwestern Connecticut. June.

The seeds of this grass are injurious to sheep by clinging to the wool and then penetrating the flesh.

ARISTIDA L. Triple-awned Grass.

Aristida dichotoma Michx. (forked).

Poverty Grass.

Common. Open, dry, sterile or sandy soil. Aug.—Sept.

Aristida gracilis Ell. (slender).

Aristida gracilis Ell., var. *depauperata* Gray.

Dry, sandy soil. Occasional or local near the coast, becoming rare northward. Aug.—Sept.

Aristida tuberculosa Nutt. (pimply).

Rare or local. Sea beaches from Orange westward. Aug.—Sept.

Aristida purpurascens Poir. (purplish).

Dry, sterile fields and pastures. Occasional or frequent except in the southwestern part of the state where it is rare or local. Aug.—Sept.

MUHLENBERGIA Schreb. Drop-seed Grass.

Muhlenbergia sobolifera (Muhl.) Trin. (producing offshoots).

Dry rocky woods. Generally rare, but frequent in southwestern Connecticut. Aug.—Sept.

Muhlenbergia tenuiflora (Willd.) BSP. (slender-flowered).

Muhlenbergia Willdenowii Trin.

Occasional or frequent. Rich or rocky woods. Aug.—Sept.

Muhlenbergia sylvatica Torr. (of woods).

Rocky woods, either moist or dry. Rare or occasional over most of the state, becoming frequent in southwestern Connecticut. Aug.—Sept.

Muhlenbergia foliosa Trin. (closely clothed with leaves).

Muhlenbergia ambigua Torr.

Moist woods. Southington (Bissell), and probably elsewhere, as the species has been confused with *Muhlenbergia mexicana*. Aug.—Sept.

Muhlenbergia mexicana (L.) Trin.

Crab Grass. Knot-root Grass.

Frequent or common. Moist or rich soil in cultivated ground, along roadsides and in waste places of towns and cities; also occasional in bogs and swamps and near streams. Aug.—Sept.

Sometimes troublesome as a weed in gardens and lawns. A cultivated form with striped leaves has escaped, and is established in a yard at Southington (Bissell).

Muhlenbergia racemosa (Michx.) BSP. (racemose).

Muhlenbergia glomerata Trin.

Bogs and swamps or sometimes in dry, rocky ground. Frequent in Litchfield County, becoming occasional or rare eastward and southward; reaching Union and Willington (Bissell), Franklin (R. W. Woodward), Meriden (Andrews & Bissell), New Haven (Eaton Herb.), Monroe (Eames). Aug.—Sept.

Muhlenbergia Schreberi J. F. Gmel.*Muhlenbergia diffusa* Schreb.

Drop-seed. Nimble Will.

Frequent along roadsides, in yards and waste places near dwellings; rare elsewhere. Aug.—Sept.

Muhlenbergia capillaris (Lam.) Trin. (hair-like).

Hair Grass.

Rare. Rocky cliffs: Hamden (O. Harger), New Haven (O. Harger, R. W. Woodward & Harger). Sept.

BRACHYELYTRUM Beauv.**Brachyelytrum erectum** (Schreb.) Beauv. (erect).*Brachyelytrum aristatum* Beauv.

Rich moist or rocky woods. Frequent except along the coast eastward where it is rare. July—Aug.

PHLEUM L. Timothy. Herd's Grass.**Phleum pratense** L. (of meadows).

Timothy. Herd's Grass. Cat-tail Grass.

Common. Fields, roadsides and pastures. June—Aug. Naturalized from Europe.

Extensively grown and very valuable for hay. It is said to have been introduced into Maryland in 1720 by Timothy Hanson, hence the name "Timothy."

ALOPECURUS L. Foxtail Grass.**Alopecurus pratensis** L. (of meadows).

Meadow Foxtail.

Rare. Moist fields and roadsides: New London (Graves), Middlebury (Harger), Southington, Litchfield and Cornwall (Bissell). May—June. Adventive from Europe.

A desirable grass for moist pastures.

Alopecurus geniculatus L. (abruptly bent).

Marsh, Water or Floating Foxtail.

Rare or local. Wet meadows and along brooks: Hartford (A. W. Driggs), Wethersfield (C. Wright), Southington (Andrews & Bissell). May—June.

A good grazing grass for wet grounds.

Alopecurus geniculatus L., var. **aristulatus** Torr. (with small awns or bristles).

Rare. Shallow water of ditches: Meriden (Harger & Mrs. C. S. Phelps), Salisbury (Weatherby & Mrs. C. S. Phelps). May—June.

SPOROBOLUS R. Br. Drop-seed. Rush Grass.

Sporobolus clandestinus (Spreng.) Hitchc. (concealed).

Sporobolus asper of Manuals.

Rare. Open, rocky ground: New Haven (R. W. Woodward). Sept.

Sporobolus asper (Michx.) Kunth (rough).

Sporobolus longifolius Wood.

Dry, sandy soils. In northern districts rare or occasional: Salisbury (Mrs. C. S. Phelps), New Milford (Eames), Oxford (Harger), Southington (Andrews & Bissell), Hartford (C. Wright). Becoming frequent near the coast and common about New Haven. Aug.—Sept.

Sporobolus vaginiflorus (Torr.) Wood (having the flowers in sheaths).

Frequent to common. Dry, sterile fields and sandy roadsides. Aug.—Sept.

Sporobolus neglectus Nash (neglected).

Rare. Dry ground: Oxford (Weatherby). Sept.

Sporobolus cryptandrus (Torr.) Gray (with hidden stamens).

Occasional in the southwestern part of the state, in sandy soil along the coast (Eames). July—Aug.

Sporobolus heterolepis Gray (various-scaled).

Rare. Dry, rocky summits: New Haven (Dr. Monson, O. D. Allen, Harger & R. W. Woodward). Sept.

Sporobolus uniflorus (Muhl.) Scribn. & Merr. (one-flowered).

Sporobolus serotinus Gray.

Peat bogs and open swamps. Frequent in the eastern part of the state, becoming rare or local westward: East Haven (A. H. Young & Harger), Southington (Andrews), Wolcott

(Andrews & Bissell), Waterbury (A. E. Blewitt), Middlebury (Harger), Norfolk (Bissell). Aug.—Sept.

A very delicate grass.

AGROSTIS L. Bent Grass.

Agrostis alba L. (white).

Fiorin. White Bent Grass. Red Top. Fine Bent. Dew Grass.

Local or occasional. Open, generally moist ground. July — Aug. In part naturalized from Europe.

The var. *VULGARIS* (With.) Thurb. (common), *Agrostis vulgaris* With., cultivated under the name of Red Top, is common in fields and open ground and is a valuable grass for hay and pasturage. This variety is usually introduced from Europe but is perhaps also native.

Agrostis alba L., var. *aristata* Gray (awned).

Rare. Franklin, moist peaty soil in shade (R. W. Woodward). July.

Agrostis alba L., var. *maritima* (Lam.) G. F. W. Mey. (of the sea-coast).

Agrostis coarctata Ehrh.

Frequent along the coast in salt and brackish marshes; rare inland as at Southington (Bissell), Oxford (Harger). July — Sept.

Agrostis hyemalis (Walt.) BSP. (wintering).

Agrostis scabra Willd.

Agrostis scabra Willd., var. *montana* Gray's Manual ed. 6.

Hair or Rough Hair Grass. Rough Bent. Fly-away or Silk Grass.

Frequent or common. Dry or moist open ground, often in sandy soil. June — Sept.

Agrostis perennans (Walt.) Tuckerm. (perennial).

Agrostis intermedia Scribn.

Thin Grass.

Frequent. Rich woodlands either dry or moist. Aug.—Sept.

Agrostis canina L. (of a dog).

Brown Bent Grass. Rhode Island Bent.

Local. Meadows, East Hartford (Weatherby); dry, ster-

ile field on bank of the Housatonic River, Milford (Eames); field, Westport (Eames & C. C. Godfrey). July. Adventive from Europe.

POLYPOGON Desf. Beard Grass.

Polypogon monspeliensis (L.) Desf.

Beard Grass.

Rare. Waste places: Manchester (A. W. Driggs). July—Sept. Fugitive from Europe.

CALAMAGROSTIS Adans. Reed Bent Grass.

Calamagrostis canadensis (Michx.) Beauv.

Blue-joint Grass. Blue-stem. Reed Bent Grass.

Frequent. Wet meadows and borders of swamps. July. A valuable grass for wet grounds, making good hay if cut early.

Calamagrostis cinnoides (Muhl.) Barton (like *Cinna*, the Reed Grass).

Calamagrostis Nuttalliana Steud.

Occasional. Bogs and open swamps. Aug.—Sept.

AMMOPHILA Host.

Ammophila arenaria (L.) Link (of sand).

Ammophila arundinacea Host.

Beach Grass. Sea Sand Reed. Psamma. Marram.

Common along the coast on sand dunes and beaches. Aug.—Sept.

Most valuable as a sand binder, its long underground stems holding the sand together and preventing it from being blown by the wind.

CINNA L. Wood Reed Grass.

Cinna arundinacea L. (reed-like).

Frequent. Wet woods and shaded swamps. Aug.—Sept.

Cinna latifolia (Trev.) Griseb. (broad-leaved).

Cinna pendula Trin.

Rare. Moist shaded rocks: Barkhamsted (A. E. Blewitt), Hartland and Colebrook (Bissell), Salisbury (Mrs. C. S. Phelps). Aug.—Sept.

HOLCUS L.**Holcus lanatus L.** (woolly).

Velvet Grass.

Occasional to frequent. Moist fields and roadsides. June—July. Naturalized from Europe.

SPHENOPHOLIS Scribn.**Sphenopholis obtusata** (Michx.) Scribn. (blunt).

Eatonia obtusata Gray.

Rare or local. Borders of salt marshes: New Haven (R. W. Woodward), Fairfield (Eames). June—early July.

The var. *PUBESCENS* (Scribn. & Merr.) Scribn. (downy) occurs at Stratford and Fairfield (Eames).

Sphenopholis nitida (Spreng.) Scribn. (shining).

Eatonia nitida Nash.

Eatonia Dudleyi Vasey.

Dry, usually rocky woods. Generally frequent, but reported rare in the central part of the state. May—June.

Sphenopholis pallens (Spreng.) Scribn. (pale).

Eatonia pennsylvanica Gray.

Moist or dry woods and in open, wet meadows. Occasional along the coast, becoming frequent northward. June—early July.

The var. *MAJOR* (Torr.) Scribn. (larger), *Eatonia pennsylvanica* Gray, var. *major* Torr., occurs at Southington and Salisbury (Bissell).

Sphenopholis palustris (Michx.) Scribn. (of marshes).

Trisetum palustre Trin.

Trisetum pennsylvanicum Britton & Brown's Ill. Flora.

Rare or occasional. Wet meadows and open swamps. June.

TRisetum Pers.**Trisetum spicatum** (L.) Richter (spiked).

Trisetum subspicatum Beauv.

Trisetum subspicatum Beauv., var. *molle* Gray.

Rare. Limestone ledges: Salisbury (J. R. Churchill). May—June.

DESCHAMPSIA Beauv.**Deschampsia flexuosa** (L.) Trin. (zigzag).

Common Hair Grass.

Dry woods and rocky hillsides. Frequent to common along the coast and on banks of tidal rivers; occurring rarely inland, as at Salisbury (Bissell). June—July.

Deschampsia caespitosa (L.) Beauv. (tufted).

Tufted Hair Grass.

Frequent on shores of tidal rivers in the southeastern part of the state, rare or local elsewhere: New Haven (A. L. Winton), Southington, introduced and established in one field (Bissell). June—July.

AVENA L. Oat.**Avena sativa** L. (sown).

Common Oat.

Occasional. Roadsides and waste places. June—July.
Fugitive from Europe.

It is extensively grown as food for man and beast and is also reputed to have medicinal value.

ARRHENATHERUM Beauv. Oat Grass.**Arrhenatherum elatius** (L.) Beauv. (rather tall).

Arrhenatherum avenaceum Beauv.

Tall Oat Grass.

Fields and roadsides. Occasional in most parts of the state; frequent in the southwestern portion. June. Naturalized from Europe.

DANTHONIA DC. Wild Oat Grass.**Danthonia spicata** (L.) Beauv. (spiked).

Common. Dry, sterile soils. June—July.

Often covering large areas of dry meadow or pasture land, but of little value either for hay or pasturage.

Danthonia compressa Aust. (flattened).

Dry woods or sometimes on exposed, ledgy places. Occasional in southeastern and southwestern Connecticut, apparently rare in other parts of the state: Union and Windham

(Bissell), Southington (Andrews & Bissell), Cheshire (A. E. Blewitt), Naugatuck (Eames). June—July.

SPARTINA Schreb. Cord or Marsh Grass.

Spartina Michauxiana Hitchc.

Spartina cynosuroides of American authors, not Roth.

Slough, Cord, Bull or Thatch Grass. Tall Marsh Grass.

Marshes and shallow water both fresh and salt. Frequent to common along the coast and near tidal rivers; rare inland as at Glastonbury (Andrews), Oxford (Harger). July—Sept.

Spartina cynosuroides (L.) Roth (like *Cynosurus*, the Dog's-tail Grass).

Spartina polystachya Willd.

Salt Reed Grass.

Borders of salt marshes and creeks. Rare in eastern Connecticut: Old Lyme (Graves), Old Saybrook (Bissell). Becoming occasional from New Haven westward. July—Sept.

Spartina glabra Muhl. (smooth).

Spartina stricta Roth, var. *glabra* Gray.

Salt Marsh Grass.

In its typical form not known in Connecticut. The var. **PILOSA** Merr. (hairy) is common on borders of salt marshes and tidal rivers. Aug.—Sept.

Forms an important part of the hay cut on the salt marshes.

Spartina glabra Muhl., var. **alterniflora** (Loisel.) Merr. (alternate-flowered).

Spartina stricta Roth., var. *alterniflora* Gray.

Salt Marsh Grass.

Occasional. Borders of salt marshes and tidal streams. Aug.—Sept.

Spartina patens (Ait.) Muhl. (spreading) var. **juncea** (Michx.) Hitchc. (rush-like).

Spartina juncea Willd.

Trachynotia juncea Michx.

Salt Meadow Grass.

Common on salt meadows along the coast. July—Sept. Furnishes much of the hay cut on the salt meadows.

- Spartina patens** (Ait.) Muhl., var. *caespitosa* (A. A. Eaton) Hitchc. (growing in tufts).
Rare. Salt marshes: Groton (Graves). July — Aug.

CYNODON Richard. Bermuda or Scutch Grass.

- Cynodon Dactylon** (L.) Pers. (finger).

Capriola Dactylon Kuntze.

Bermuda or Scutch Grass.

Rare. Waste ground: New Haven (O. Harger). July — Aug. Fugitive from Europe where it is native, or from the South where it has been introduced and is often cultivated as a pasture grass.

BOUTELOUA Lag. Mesquite Grass.

- Bouteloua curtipendula** (Michx.) Torr. (short-hanging).

Bouteloua racemosa Lag.

Atheropogon curtipendulus Fourn.

Mesquite Grass.

Rare. Dry, open sandy soil: Oxford (H. C. Beardslee, Harger), Salisbury (Mrs. C. S. Phelps). Aug.—Sept.

ELEUSINE Gaertn. Goose Grass. Yard Grass.

- Eleusine indica** Gaertn.

Crab, Yard, or Wire Grass.

Occasional to common, chiefly near dwellings and in waste places of towns and cities, but sometimes in country districts, especially those in the valley of the Connecticut River. Aug. — Sept. Naturalized from India.

LEPTOCHLOA Beauv.

- Leptochloa fascicularis** (Lam.) Gray (clustered).

Diplachne fascicularis Beauv.

Rare. Borders of salt or brackish marshes: Stonington (Graves), Groton (Bissell & Graves), New Haven (W. A. Setchell, Harger), Stratford (Eames & Harger). Aug.—Sept.

PHRAGMITES Trin. Reed.

Phragmites communis Trin. (growing in colonies).

Phragmites vulgaris BSP.

Phragmites Phragmites Karst.

Wild Broom Corn.

Borders of marshes, either salt or fresh. Apparently rare inland: Salisbury (Mrs. C. S. Phelps). Occasional along the coast, becoming more frequent in the southwestern corner of the state. Late Aug.—Sept.

A tall, striking grass with broad leaves, the largest of our native grasses.

TRIDENS R. & S.

Tridens flavus (L.) Hitchc. (yellow).

Triodia cuprea Jacq.

Sieglingia seslerioides Scribn.

Tricuspis seslerioides Torr.

Tall Red Top.

Dry fields and roadsides, generally in sandy or sterile soil. Rare in the eastern part of the state: East Lyme and the valley of the Thames River (Graves). Becoming occasional westward along the coast and in the river valleys and frequent in southwestern Connecticut. In the Housatonic Valley it is found as far north as Kent (Eames). Aug.

TRIPLASIS Beauv.

Triplasis purpurea (Walt.) Chapm. (purple).

Triodia purpurea Hack.

Sieglingia purpurea Kuntze.

Sand Grass.

Dry, open sandy places. Occasional to frequent along the shore; rare inland as at Lisbon (Harger). July — Sept.

MOLINIA Schrank.

Molinia coerulea (L.) Moench (sky-blue).

Rare. Well established along roadsides: New Haven (R. W. Woodward). July — Aug. Adventive from Europe.

ERAGROSTIS Beauv.

Eragrostis hypnoides (Lam.) BSP. (like Hypnum, a kind of creeping Moss).

Eragrostis reptans Nees.

Sandy shores of rivers and sometimes ponds. Frequent in the valleys of the Connecticut and Housatonic Rivers; rare elsewhere. Aug.—Sept.

Eragrostis capillaris (L.) Nees (hair-like).

Hair Grass.

Dry fields or thin woods in sandy ground. Occasional, becoming frequent or locally common in some parts of southwestern and central Connecticut. Aug.—Sept.

Eragrostis Frankii (Fisch., Mey. & Lall.) Steud.

Rare or local. River shores and roadsides in sandy soil: Lyme (Graves & Bissell), Middletown (A. W. Driggs), East Windsor, Windsor and Hartford (Bissell), Oxford (Harger), Salisbury (Mrs. C. S. Phelps). Aug.—Sept.

Eragrostis pilosa (L.) Beauv. (hairy).

Eragrostis Purshii Schrad.

Frequent. Dry soils, along roadsides and railways, on river shores and in waste places. July — Sept.

Eragrostis megastachya (Koeler) Link (large-spiked).

Eragrostis major Host.

Stink Grass. Snake Grass.

Occasional or frequent. Waste places, roadsides, and as a weed in cultivated ground. July — Sept. Naturalized from Europe.

The fresh plant emits a strong, unpleasant odor.

Eragrostis minor Host (smaller).

Rare. Waste ground: Bridgeport (Eames). Aug. Adventive from Europe.

Eragrostis pectinacea (Michx.) Steud. (comb-like).

Purple Eragrostis.

Frequent or common. Dry, open ground. Aug.—Sept.

A beautiful native grass, one of the "purple grasses" distinguished by Thoreau in his essay "Autumnal Tints."

MELICA L. Melic Grass.**Melica striata** (Michx.) Hitchc. (streaked).*Avena striata* Michx.

Purple Oat.

Local. Rocky woods: Oxford (Harger). Limestone ledges: Salisbury and Sharon (Bissell). May—June.

DISTICHLIS Raf. Spike Grass. Alkali Grass.**Distichlis spicata** (L.) Greene (spiked).*Distichlis maritima* Raf.

Alkali Grass.

Frequent or common in salt meadows along the coast. Aug.—Sept.

It is of considerable value as a sand binder.

BRIZA L. Quaking Grass.**Briza media** L. (intermediate).

Rare. Fields and waste places: Mansfield (R. W. Woodward), Salisbury (Mrs. C. S. Phelps). June—July. Adventive from Europe.

Sometimes cultivated for ornament.

DACTYLIS L. Orchard Grass.**Dactylis glomerata** L. (densely clustered).

Orchard Grass.

Common. Fields, roadsides and waste places. June—July. Naturalized from Europe.

In cultivation a valuable grass for shaded ground.

CYNOSURUS L.**Cynosurus cristatus** L. (crested).

Dog's-tail Grass.

Rare. New London, well established in one lawn (Graves). June. Adventive from Europe.

POA L. Meadow Grass. Spear Grass.**Poa annua** L. (annual).

Low Spear Grass. Goose Grass.

Common. Cultivated ground and waste places. Apr.—Nov. Naturalized from Europe.

Poa compressa L. (flattened).

Creeping Spear Grass. Wire Grass. Flat-stemmed or Canada Blue Grass.

Common. Fields, waste places and woods, mostly in dry ground. May — Aug. Naturalized from Europe.

Said to be a valuable grass for dry and poor soils.

Poa triflora Gilib. (three-flowered).

Poa serotina Ehrh.

Poa flava of American authors, not L.

False Red Top. Fowl Meadow Grass. Swamp Wire Grass. Duck Grass.

Frequent or occasional. Moist meadows. July — Aug.

A desirable grass for hay in wet ground.

Poa pratensis L. (of meadows).

June Grass. Kentucky Blue Grass. Spear Grass. Smooth Meadow Grass.

Common. Meadows, fields and pastures. May — June.

In Connecticut naturalized from Europe.

A valuable grass for pastures and lawns, and in some parts of the country much cultivated. The stems of this grass are used in the manufacture of the finer grades of Leghorn hats.

Poa trivialis L. (common).

Rough-stalked Meadow Grass.

Occasional. Moist meadows, borders of streams and about springs. June — July. Naturalized from Europe.

Poa debilis Torr. (weak).

Rare or local. Rocky woods or fields, either dry or moist: Union, Ashford and Stafford (Weatherby & Bissell), Oxford (Harger), New Haven (R. W. Woodward), Salisbury (C. S. Phelps & Bissell). May — July.

Poa alsodes Gray (of groves).

Rocky woods or along woodland brooks. Rare or local in the eastern part of the state and along the coast westward, becoming occasional in northwestern Connecticut. May — June.

GLYCERIA R. Br. Manna Grass.**Glyceria Torreyana** (Spreng.) Hitchc.*Glyceria elongata* Trin.*Panicularia elongata* Kuntze.

Wet woods and along wooded brooks and borders of swamps. Rare in southeastern Connecticut and along the coast, becoming occasional or frequent northward. June—July.

Glyceria obtusa (Muhl.) Trin. (blunt).*Panicularia obtusa* Kuntze.

Swamps and boggy meadows. Frequent or occasional in the southeastern part of the state and westward along the coast; rare inland. Mid July—Sept.

Glyceria canadensis (Michx.) Trin.*Panicularia canadensis* Kuntze.

Pearl Grass. Rattlesnake Grass. Tall Quaking Grass. Tuscarora Rice.

Frequent. Bogs, open swamps and ditches. June—July.

Glyceria nervata (Willd.) Trin. (nerved).*Panicularia nervata* Kuntze.

Fowl Meadow Grass. Manna Grass. Meadow Spear Grass.

Common. Open swamps, boggy meadows, along streams and about ponds. June—July.

A good forage grass for wet grounds. The seeds furnish much food for water-fowl.

Glyceria grandis Wats. (large).*Panicularia americana* MacMill.

Tall Manna Grass. Reed Meadow Grass.

Moist or wet open ground. Rare in the eastern part of the state and on the coast: Lyme (Graves), New Haven (Harger), Norwalk (Bissell). Elsewhere occasional. June—July.

Glyceria pallida (Torr.) Trin. (pale).*Panicularia pallida* Kuntze.

Pale Manna Grass.

Occasional. Shallow water, wet bogs and swamps. June—July.

***Glyceria septentrionalis* Hitchc. (northern).**

Glyceria fluitans of American authors, not R. Br.

Panicularia fluitans of Britton's Manual.

Floating Manna Grass.

Rare. Wet meadows: Stonington (Graves), Thompson and Woodstock (Harger), Cheshire (D. C. Eaton), Bridgeport and Westport (Eames), Salisbury (Bissell). June — July.

***Glyceria borealis* (Nash) Batchelder (northern).**

Panicularia borealis Nash.

Rare. Swampy ground along brooks and in ditches: Woodstock (Weatherby), Farmington (Andrews & Bissell), Norfolk (Bissell). June — July.

***Glyceria acutiflora* Torr. (with pointed flowers).**

Panicularia acutiflora Kuntze.

Open swamps and wet meadows. Occasional in the southeastern part of the state, becoming frequent or common elsewhere. June.

PUCCINELLIA Parl.***Puccinellia angustata* (R. Br.) Rand & Redfield (narrow).**

Puccinellia maritima Parl., var. (?) *minor* Gray's Manual ed. 6.

Goose Grass. Sea Spear Grass.

Rare. Old Lyme, shore of Blackhall River (Graves). June.

***Puccinellia distans* (L.) Parl. (standing apart).**

Goose Grass.

Wet tidal sands and borders of salt marshes. Rare in southeastern Connecticut, becoming occasional or frequent westward. June — July.

***Puccinellia Borreri* (Bab.) Hitchc.**

Rare. Bridgeport, sandy shore of Cedar Creek (Eames). June — July.

Introduced from Europe.

FESTUCA L. Fescue Grass.**Festuca octoflora** Walt. (eight-flowered).*Festuca tenella* Willd.

Slender Fescue.

Dry sandy soil or thin soil on ledges. Occasional over the greater part of the state, becoming frequent in the southwestern portion. June—July.

Festuca rubra L. (red).

Swamps and marshes or sometimes in fields or on ledges. Frequent or common along and near the coast; occasional inland. June—July.

Festuca ovina L. (of sheep).

Sheep's Fescue.

Rare or occasional. Dry fields or in sterile soils. June—July.

The var. *CAPILLATA* (Lam.) Hack. (hair-like), *Festuca capillata* Lam., is occasional in similar situations. The species is native northward, but in Connecticut both that and the variety are naturalized from Europe.

Valuable as a forage grass, especially for sheep; also a good grass for lawns.

Festuca elatior L. (taller).*Festuca elatior* L., var. *pratensis* Gray.

Taller or Meadow Fescue.

Common. Meadows, fields and waste places. June—July. Naturalized from Europe.

A grass of much value both for pasturage and hay.

Festuca nutans Spreng. (nodding).

Occasional or frequent. Rocky woodlands. June—July.

BROMUS L. Brome Grass.**Bromus secalinus** L. (rye-like).

Cheat. Chess.

Occasional or frequent. Grassland, roadsides and often in grain fields. June—Aug. Adventive from Europe.

A pernicious weed in grain fields. In some countries the seeds are mixed with rye or wheat for use as food.

Bromus hordeaceus L. (like *Hordeum*, the Barley).*Bromus mollis* L.

Soft Chess.

Rare. Waste places: New London (Graves), Hartford (Bissell), Southington (Andrews). June. Adventive from Europe.

Bromus squarrosus L. (with spreading scales).

Rare. Naugatuck, in waste ground (A. E. Blewitt). June. Fugitive from Europe.

Bromus racemosus L. (racemed).

Waste places and roadsides. Occasional in southwestern Connecticut (Eames). Rare elsewhere: New London (Graves), Norwich (Miss Hakes), New Haven (O. D. Allen). June. Adventive from Europe.

Bromus commutatus Schrad. (variable).

Rare. Roadsides and waste ground: Cromwell (Andrews & Bissell), Middletown and Southington (Bissell). June — July. Adventive from Europe.

Bromus brizaeformis Fisch. & Mey. (like *Briza*, the Quaking Grass).

Rare. Waste ground: New Haven (R. W. Woodward). July — Aug. Adventive, probably from Europe.

Bromus tectorum L. (of dwellings).

Sandy or sterile waste places. Frequent or common in or near cities and along railroads, rare elsewhere. May — July. Naturalized from Europe.

Bromus ciliatus L. (fringed).

Wood Chess. Hairy Brome Grass.

Dry soil of rocky woods or railroad banks. Rare near the coast, becoming occasional northward. July — Aug.

Bromus purgans L. (purging).*Bromus ciliatus* L., var. *purgans* Gray.

Frequent. Rocky woods and copses. July — Aug.

Bromus altissimus Pursh (tallest).

Rocky woods and shaded alluvial ground. Occasional or local throughout the northern part of the state, extending

southward to Lyme (Bissell), and Derby (Harger), its exact distribution unknown. July — Aug.

Bromus Kalmii Gray.

Wild Chess.

Dry hillsides and rocky woods, or sometimes in moist meadows. Absent or rare near the coast, becoming occasional or frequent northward. June — July.

Bromus erectus Huds. (erect).

Rare. Introduced in one field, Southington (Bissell). May — June. Adventive from Europe.

Bromus inermis Leyss. (unarmed; referring to the absence of awns).

Hungarian Brome Grass.

Rare. Fields and roadsides: East Windsor (G. S. Phelps), Naugatuck (A. E. Blewitt), Salisbury (Mrs. C. S. Phelps). July. Adventive from Europe.

In Europe considered one of the best forage plants for dry soils. Introduced and cultivated for hay in many parts of the United States.

LOLIUM L. Darnel.

Lolium perenne L. (perennial).

Perennial Ray Grass or Rye Grass. Nonesuch. Common Darnel.

Rare or occasional. Fields, waste places or cultivated ground. July — Aug. Adventive from Europe.

Lolium multiflorum Lam. (many-flowered).

Lolium italicum R. Br.

Italian Rye or Ray Grass.

Rare. Waste grounds and roadsides: Bridgeport (Eames). July — Sept.

Adventive from Europe, where it is regarded as one of the best grasses for hay.

Lolium temulentum L. (drunken; referring to the narcotic properties of the seeds).

Bearded Darnel.

Rare or local. Waste grounds: Bridgeport, in several places and usually associated with *Phalaris canariensis*, with

which it appears to have been introduced (Eames). July.
Adventive from Europe.

AGROPYRON Gaertn.

Agropyron repens (L.) Beauv. (creeping).

Couch, Quack, Quitch, Durfee, Scutch, Shear, Dog, or Knot Grass.

Common. Fields, cultivated ground and waste places.
June — Aug. Naturalized from Europe.

A bad weed, very troublesome in cultivated ground. The rootstocks are of medicinal value and are officinal.

Agropyron tenerum Vasey (delicate).

Rare. Naugatuck, in waste ground (A. E. Blewitt). July
— Aug. Fugitive from the western United States.

Agropyron caninum (L.) Beauv. (of a dog).

Awned Wheat Grass. Dog's Wheat or Couch Grass.

Occasional or local. Dry or moist thickets, fields and woods: Killingly (Weatherby & Bissell), Union, East Had-dam, Southington, Norfolk and Salisbury (Bissell), Oxford (Harger). July — Aug. In part naturalized from Europe.

SECALE L. Rye.

Secale cereale L. (cereal).

Rye.

Occasional. Roadsides and waste places as an escape from cultivation. June. Fugitive from Europe.

The grain furnishes a valuable cereal and is largely used in the manufacture of distilled liquors.

TRITICUM L. Wheat.

Triticum sativum Lam. (sown).

Triticum vulgare Vill.

Wheat.

Local. Old fields and waste places as an escape from cultivation. June. Fugitive from Europe.

Easily leads all other food plants in value and importance.

HORDEUM L. Barley.**Hordeum jubatum L.** (maned).

Squirrel-tail Grass.

Rare or local. Salt marshes where it is apparently native: Branford (Andrews & Bissell), New Haven and Milford (Harger), Fairfield (Eames). Introduced in waste grounds: Norwich (Mrs. E. E. Rogers), Berlin (J. N. Bishop), Hartford (Bissell), Bridgeport (Eames), Waterbury and Naugatuck (A. E. Blewitt), Salisbury (Mrs. C. S. Phelps). June — Sept.

This grass is very injurious in hay, the beards of the heads sticking in the nose and mouth of stock, even penetrating the flesh and causing death.

Hordeum vulgare L. (common).

Common Barley.

Frequent as a weed in oat fields, rarely escaping to roadsides and waste places, as at Southington (Andrews), Oxford (Harger). July. Fugitive from Europe.

The grain is one of the important cereals, especially in northern countries. Malt is made very largely from barley.

ELYMUS L. Lyme Grass. Wild Rye.**Elymus virginicus L.**

Wild Rye. Terrell Grass.

Frequent along the coast, and in low grounds, mostly near streams, inland; rare elsewhere. July — Aug.

The var. *HIRSUTIGLUMIS* (Scribn.) Hitchc. (with hairy scales), *Elymus hirsutiglumis* Scribn., occurs at East Haven (Harger), New Haven (Bissell), Stratford (Eames), Bridgeport (C. K. Averill), and is occasional in the valleys of the larger rivers.

Elymus australis Scribn. & Ball (southern).

Rare. Dry rocky hills near New Haven (O. D. Allen). Aug.

Elymus canadensis L.

Lyme Grass. Wild Rye. Nodding Wild Rye.

Occasional, local or frequent. Moist thickets and banks of streams. July — Sept.

The var. *GLAUCIFOLIUS* (Muhl.) Gray (glaucous-leaved) is rare or occasional, mostly near streams and rivers: Sprague (Graves), East Windsor and New Hartford (Bissell), Waterbury (A. E. Blewitt), Oxford (Harger), Sherman and New Milford (Eames), Salisbury (Mrs. C. S. Phelps).

***Elymus striatus* Willd. (grooved).**

Slender Wild Rye.

Rare or occasional. Woods, thickets and near streams, mostly in dry ground. July — Aug.

HYSTRIX Moench. Bottle-brush Grass.

***Hystrix patula* Moench (spreading).**

Hystrix Hystrix Millsp.

Asprella Hystrix Willd.

Bottle-brush Grass.

Occasional to frequent. Dry, rocky woods. June — July.

CYPERACEAE. SEDGE FAMILY.

A large family, composed mostly of grass-like plants that are found in various situations, but are specially abundant in low grounds and often form nearly the entire vegetation in wet meadows and open bogs. While they are often cut for coarse hay and bedding for stock, they are of little economic value, and should be rooted out and replaced where possible by species of true grasses that will thrive in such locations. The dates given in this family are for the time of fruiting, not of flowering, as specimens should be collected when in fruit, it being impossible otherwise in some groups to determine the exact species.

CYPERUS L. Galingale.

***Cyperus diandrus* Torr. (two-stamened).**

Frequent. Moist, grassy places and about swamps. Aug. — Sept.

***Cyperus rivularis* Kunth (of streams).**

Cyperus diandrus Torr., var. *castaneus* Torr.

Frequent. Wet, sandy shores, along streams and about ponds. Aug. — Sept.

Cyperus Nuttallii Eddy.

Frequent along the coast on wet, sandy shores and edges of salt marshes. Aug.—Sept.

Cyperus aristatus Rottb. (awned).

Cyperus inflexus Muhl.

Occasional. Moist, sandy soil on river banks, beside ponds and along roadsides. Aug.—Oct.

The dried plants are pleasantly sweet-scented.

Cyperus fuscus L. (dusky).

Rare. Sandy shore of the Connecticut River near Hadlyme Ferry, Lyme (Graves). Aug.—Sept. Fugitive from Europe.

Cyperus dentatus Torr. (toothed).

Occasional or local. Sandy shores of ponds and streams. Aug.—Oct.

Cyperus esculentus L. (eatable).

Frequent. Moist fields, waste ground and along rivers. Aug.—Sept.

The var. *LEPTOSTACHYUS* Boeckl. (thin-spiked), var. *angustispicatus* Britton, is sometimes seen.

A weed, often a pest in cultivated ground and difficult to exterminate.

Cyperus erythrorhizos Muhl. (red-rooted).

Local. Plentiful along the banks of the Connecticut River at East Windsor and Glastonbury (Bissell), Hartford (C. Wright), Lyme (Graves). Also found along the Pequonnock River, Bridgeport (Eames). Aug.—Sept.

The var. *PUMILUS* Engelm. (low) occurs with the species at Hartford (H. S. Clark & Weatherby).

Cyperus ferax Richard (fruitful).

Cyperus speciosus Vahl.

Sandy beaches and about brackish marshes near the coast. Rare at Old Lyme (Graves) ; becoming occasional or frequent westward. Sept.—Oct.

Cyperus strigosus L. (bristly).

Common. Meadows, fields and along streams, usually in moist, but sometimes in dry soil.

The var. *CAPITATUS* Boeckl. (densely clustered) is reported to occur. Aug.—Sept.

Often a troublesome weed in cultivated ground.

Cyperus strigosus L., var. *robustior* Kunth (stouter).

Rare or occasional. Fields and meadows, growing with the typical form. Aug.—Sept.

Cyperus Grayii Torr.

Occasional along the coast on the higher portions of the beaches and among sand dunes. Aug.—Oct.

Cyperus filiculmis Vahl (thread-stemmed).

Rare or occasional. Dry or sandy fields. July — Aug.

Cyperus filiculmis Vahl, var. *macilentus* Fernald (lean).

Common. Dry, sandy or sterile soil. July — Aug.

DULICHIMUM Pers.**Dulichium arundinaceum** (L.) Britton (reed-like).

Dulichium spathaceum Pers.

Common. Wet places about ponds and in shallow water. July — Sept.

ELEOCHARIS R. Br. Spike Rush.**Eleocharis quadrangulata** (Michx.) R. & S. (four-cornered).

Eleocharis mutata Britton, not R. & S.

Rare. Shallow water of pond: Guilford (G. H. Bartlett). Aug.—Sept.

Eleocharis Robbinsii Oakes.

Rare. In ponds: Voluntown, Groton, Ledyard and East Lyme (Graves), Griswold (Harger), Monroe (Eames), Salisbury (Bissell). Sept.

Eleocharis olivacea Torr. (olive-colored).

Open bogs and muddy borders of ponds. Rare inland: Salisbury (Mrs. C. S. Phelps), Windsor (Bissell). Occasional southwestward and along the coast. Aug.—Sept.

Eleocharis diandra C. Wright (two-stamened).

Rare. Banks and high sand bars of the Connecticut River: Lyme (Graves), Wethersfield (C. Wright), East Windsor (Bissell). Sept.—Oct.

Eleocharis ovata (Roth) R. & S. (egg-shaped).

Rare. Sand flats, bed of the Connecticut River, East Windsor (Bissell). Sept.—Oct.

Eleocharis obtusa (Willd.) Schultes (blunt).

Eleocharis ovata of recent Manuals.

Common. Banks of streams, about ponds and in muddy places. Aug.—Sept.

Eleocharis Engelmanni Steud.

Rare. Gravelly or sandy border of ponds or streams: Wethersfield (C. Wright), West Hartford (Bissell). Aug.—Sept.

Many reports of this species should be referred to *Eleocharis obtusa*.

Eleocharis palustris (L.) R. & S. (of marshes).

Sphagnum bogs, marshy ground or shallow water on borders of ponds. The typical form is rare over most of the state: East Lyme (Graves), East Hartford (A. W. Driggs), Kent (Eames). Frequent in Fairfield County (Eames).

The var. *GLAUDESCENS* (Willd.) Gray (somewhat glaucous) is frequent throughout.

The var. *MAJOR* Sonder (greater), var. *vigens* Bailey, is rare: East Lyme (Graves). July — Aug.

Eleocharis acicularis (L.) R. & S. (needle-shaped).

Common. Borders of ponds and in shallow water. July — Sept.

Eleocharis tuberculosa (Michx.) R. & S. (pimply).

Swamps, boggy meadows and wet margins of ponds and streams. Frequent near the coast in New London County, becoming rare or local northward and westward, reaching Franklin (R. W. Woodward), Thompson (Weatherby & Bissell), New Haven and East Haven (Harger), Orange (Andrews), Milford (Eames). July — Sept.

Eleocharis Torreyana Boeckl.

Eleocharis microcarpa of authors, not Torr.

Rare. Moist sandy soil: Voluntown, at Beach Pond (R. W. Woodward & Graves). Aug.

Eleocharis tenuis (Willd.) Schultes (slender).

Common. Swamps and wet places. June — Aug.

Eleocharis intermedia (Muhl.) Schultes (intermediate).

Rare. Muddy borders of ponds and on river banks: East Windsor and Salisbury (Bissell). Sept.— Oct.

Eleocharis rostellata Torr. (small-beaked).

Marshes and wet meadows along the coast. Rare or local in New Haven County: Milford (Eames), Orange (Andrews), New Haven (Harger). Becoming occasional eastward. Aug.

STENOPHYLLUS Raf.**Stenophyllus capillaris** (L.) Britton (hair-like).

Fimbristylis capillaris Gray.

Common. Dry or moist sterile soil. Aug.— Sept.

FIMBRISTYLIS Vahl.**Fimbristylis Frankii** Steud.

Fimbristylis autumnalis of American authors in part, not R. & S.

Frequent. Wet places on banks of ponds and streams, or in low meadows. Aug.— Sept.

SCIRPUS L. Bulrush. Club Rush.**Scirpus nanus** Spreng. (dwarf).

Eleocharis pygmaea Torr.

Salt marshes and tidal banks along the coast. Rare eastward: Groton and Montville (Graves). Becoming frequent west of New Haven (Eames). July — Sept.

Scirpus planifolius Muhl. (flat-leaved).

Dry woodlands. Rare in New London County: Montville, Ledyard and East Lyme (Graves). Occasional or frequent elsewhere. June.

Scirpus hudsonianus (Michx.) Fernald.

Eriophorum alpinum L., not *Scirpus alpinus* Schleich.

Rare or local. Open bogs and wet meadows: Union, Ashford and Stafford (Weatherby & Bissell), Willington (H. C. Beardslee), Mansfield (A. F. Blakeslee), Goshen (Mr. Hopkin). May — early June.

Scirpus subterminalis Torr. (a little below the end).

Rare or local. Shallow water of ponds: Ledyard (W. A. Setchell), Voluntown, Groton, East Lyme and Lyme (Graves), Guilford (G. H. Bartlett), Salisbury (Bissell). Aug.

Scirpus debilis Pursh (weak).

Frequent. Muddy borders of ponds and streams. Aug.—Sept.

Scirpus Smithii Gray.

Rare or local. Muddy shores: Lyme (Graves), Monroe (H. C. Beardslee), Newtown (Eames). Aug.—Sept.

Scirpus americanus Pers.

Scirpus pungens Vahl.

Three-square or Chair-maker's Rush.

Marshes and wet places. Occasional or local over most of the state, but common along and near the coast. July — Aug.

Scirpus Torreyi Olney.

Local. Lyme, marshy banks and shallow water of the Connecticut River (Graves). Aug.

Scirpus Olneyi Gray.

Salt or brackish marshes. Occasional or local along the coast, also extending up the rivers as far as salt water influences. July — Aug.

The var. *CONTORTUS* Eames (twisted or bent) is plentiful in a brackish marsh at Milford (Eames).

Scirpus validus Vahl (stout).

Scirpus lacustris mostly of American authors, not L.

Great Bulrush.

Frequent. Shallow water and in swamps. July — Aug.

Scirpus fluviatilis Torr. & Gray (of a river).

River Bulrush.

Rare or local. Lyme and Old Lyme, in fresh and salt creeks and marshes (Graves); East Windsor and Glastonbury, banks of the Connecticut River (Bissell). July — Sept.

Scirpus robustus Pursh (stout).

Scirpus maritimus of American authors in part.

Occasional in salt or brackish marshes on or near the coast. July — Aug.

Scirpus campestris Britton (of fields).

Scirpus maritimus in part, of authors.

In its typical form not known in Connecticut.

The var. *PALUDOSUS* (A. Nelson) Fernald (of marshes), *Scirpus paludosus* A. Nelson, is frequent in marshes along the coast.

The var. *NOVAE-ANGLIAE* (Britton) Fernald, *Scirpus novae-angliae* Britton, is rare or local in fresh and brackish marshes on the coast from Milford westward (Eames). July — Aug.

Scirpus rubrotinctus Fernald (red-dyed).

Scirpus sylvaticus L., var. *digynus* Gray's Manual ed. 6, not Boeckl.

Rare or local. Swamps and marshy meadows: Lyme (Graves), Southington (Andrews & Bissell), Waterbury (Harger), Union, Glastonbury, East Windsor, Somers, Litchfield and Norfolk (Bissell). Late June — early July.

Scirpus sylvaticus L. (of woods).

Occasional or frequent. Swamps, along streams and about ponds. Late July — Aug.

Scirpus sylvaticus L., var. *Bissellii* Fernald.

Rare. Open swamps: Southington (Andrews, Bissell), Ansonia (Harger). July.

Scirpus atrovirens Muhl. (dark green).

Rare. Moist ground: Orange, Huntington and Southbury (Harger), Milford (Eames). Aug.

Scirpus georgianus Harper.

Scirpus atrovirens of Manuals in part.

Frequent. Moist meadows and wet open ground. July — early Aug.

Scirpus polyphyllus Vahl (many-leaved).

Wet meadows and shaded swamps. Rare through most of the state: Lyme (Graves), Southington and Berlin (Andrews & Bissell), Cheshire, Derby and Oxford (Harger), New Haven and Milford (Eames), Colebrook (Bissell). Becoming frequent in Fairfield County (Eames). July.

The var. *MACROSTACHYS* Boeckl. (long-spiked) has been found at Berlin (Andrews & Bissell).

Scirpus lineatus Michx. (marked with lines).

Eriophorum lineatum Benth. & Hook.

Rare or local. Wet meadows: New Haven (D. C. Eaton), New Milford and Sharon (Bissell), Salisbury (Mrs. C. S. Phelps). July.

Scirpus cyperinus (L.) Kunth (rush-like).

Eriophorum cyperinum L.

Wool Grass.

Common. Swamps and wet places. Aug.—Sept.

The var. *ANDREWSII* Fernald has been found at Killingly (Weatherby & Bissell), East Hartford (Bissell), Southington (Andrews).

Scirpus cyperinus (L.) Kunth, var. *pelius* Fernald (black or livid).

Rare. Swamps: Lyme (Graves & Bissell), Hartford and Granby (Bissell), Oxford (Harger). Aug.

The var. *CONDENSATUS* Fernald (pressed together) occurs occasionally.

Scirpus Eriophorum Michx. (wool-bearing).

Scirpus cyperinus Kunth, var. *Eriophorum* Britton.

Rare. Swamps: Southington (Andrews), Trumbull (Eames). Aug.—Sept.

Scirpus pedicellatus Fernald (borne on stalks).

Swamps and wet meadows. Occasional to common along the Connecticut River from the northern boundary of the

state to the coast; occasional westward in southern districts.
July — Aug.

The var. *PULLUS* Fernald (dusky) is rare: Southington and Winchester (Bissell).

Scirpus atrocinctus Fernald (dark-girded).

Eriophorum cyperinum L., var. *laxum* Gray.

Low meadows and bogs. Rare or absent near the coast: New London and Lyme (Graves). Becoming occasional or frequent in the northern part of the state. Late June—July.

The var. *BRACHYPODUS* Fernald (short-stalked) occurs at Union, Somers, East Windsor and Norfolk (Bissell).

ERIOPHORUM L. Cotton Grass.

Eriophorum callitrix Cham. (having beautiful hair).

Eriophorum vaginatum of American authors, not L.

Hare's Tail.

Rare or local. Sphagnum bogs: Willington (Weatherby & Bissell), Southington (Andrews), Burlington (J. N. Bishop), Litchfield (J. P. Brace), Middlebury (Harger), Norfolk and Salisbury (Bissell). May — early June.

Eriophorum gracile Roth (slender).

Rare or local. Boggy meadows or in sphagnum: Griswold (Graves), Union (Weatherby & Bissell), Franklin (R. W. Woodward & Graves), Coventry, Cheshire, Southington and Burlington (Bissell), Meriden and Bethany (Harger), Easton (Eames), New Milford (E. H. Austin), Salisbury (Bissell). Late May—early June.

Eriophorum tenellum Nutt. (small; delicate).

Eriophorum paucinervium A. A. Eaton.

Bogs and wet meadows. Rare or local through most of the state: South Windsor (Weatherby), Monroe and Stratford (Eames), Oxford and Meriden (Harger), Orange (R. W. Woodward), Salisbury, Southington, East Haddam and Union (Bissell). Becoming occasional in New London County (Graves). July — Aug.

Eriophorum viridi-carinatum (Engelm.) Fernald (green-keeled).

Eriophorum polystachion of most American authors in part, not L.

Eriophorum polystachion L., var. *latifolium* Gray.

Bogs and wet meadows. Rare in New London County: Groton and Griswold (Graves). Occasional elsewhere. June.

Eriophorum virginicum L.

Frequent. Wet meadows, bogs and sphagnum swamps.

Aug.—Sept.

The var. **ALBUM** Gray (white) is occasionally seen.

HEMICARPHA Nees & Arn.

Hemicarpha micrantha (Vahl) Pax (small-flowered).

Hemicarpha subsquarrosa Nees.

Rare. Wet alluvium along the banks of streams: Enfield (Andrews & Bissell), East Windsor, Hartford and Southington (Bissell), Bloomfield (N. Coleman), Oxford (H. C. Beardslee). Aug.—Sept.

RYNCHOSPORA Vahl. Beak Rush.

Rynchospora macrostachya Torr. (long-spiked).

Rynchospora corniculata Gray, var. *macrostachya* Britton.

Horned Rush.

Rare or local. Sphagnum bogs and shallow water of ponds: Groton and East Lyme (Graves), Guilford (G. H. Bartlett), Monroe (Eames), Woodbury (Harger). Aug.—Sept.

Rynchospora fusca (L.) Ait. f. (dusky).

Rare. Sphagnum bogs or swampy meadows: Thompson (Weatherby), Groton, Waterford and East Lyme (Graves), Griswold and Woodbury (Harger), Monroe (Eames). July—Sept.

Rynchospora alba (L.) Vahl (white).

Occasional or frequent. Peat swamps and open springy bogs. Aug.—Sept.

Rynchospora glomerata (L.) Vahl (densely clustered).

Common. Moist fields, meadows and in wet open places.
July — Sept.

CLADIUM P. Br. Twig Rush.

Cladium mariscoides (Muhl.) Torr. (like *Mariscus*).

Borders of ponds and marshes, either salt or fresh. Rare or local inland: Stafford (Dr. E. J. Thompson & Weatherby), Woodbury (Harger), Monroe (Eames), Salisbury (Mrs. C. S. Phelps). Becoming occasional or frequent on the coast or in its vicinity. Aug.—Sept.

SCLERIA Bergius. Nut Rush.

Scleria triglomerata Michx. (three-headed).

Sandy soil either dry or moist. Rare or local in most districts: Griswold, Stonington and Waterford (Graves), South Windsor (J. F. Smith), Hartford (A. W. Driggs), Southington (Andrews & Bissell), Cheshire (Bissell). Becoming occasional along the coast in Fairfield County (Eames). July — Aug.

Scleria pauciflora Muhl. (few-flowered), var. *caroliniana* (Willd.) Wood.

Scleria pauciflora of recent Manuals in part.

Rare or local. Low meadows: Columbia (Mrs. C. S. Phelps), Hartford (H. J. Koehler). July — Sept.

Scleria verticillata Muhl. (whorled).

Local. Salisbury, plentiful in an open grassy swamp in sandy soil (H. S. Clark & Bissell). Aug.—Sept.

CAREX L. Sedge.

Carex scoparia Schk. (broom-like).

Common. Wet open ground, or sometimes in drier places.
June — July.

The var. *MONILIFORMIS* Tuckerm. (necklace-shaped), and the var. *CONDENSA* Fernald (compact), both occur occasionally with the species.

Carex tribuloides Wahlenb. (like Tribulus, the Caltrop).

Frequent. Low meadows and swampy places. July — Aug.

The var. *TURBATA* Bailey (confused) is occasional.

Carex tribuloides Wahlenb., var. *reducta* Bailey (reduced).

Carex tribuloides Wahlenb., var. *moniliformis* Britton.

Rare. Cool swales: Woodstock (Weatherby), Franklin (R. W. Woodward), Winchester and Litchfield (Weatherby & Bissell), Salisbury (Weatherby). July.

Carex siccata Dewey (dry).

Occasional or local. Dry sandy or barren ground, usually growing in colonies. Late May — June.

Carex Crawfordii Fernald.

Local. Salisbury, in dry fields (M. L. Fernald). June.

Carex cristata Schwein. (crested).

Carex tribuloides Wahlenb., var. *cristata* Bailey.

Carex cristatella Britton.

Rare or local. Low meadows and thickets and along river banks: Ledyard (Graves), Southington (Andrews & Bissell), Oxford (Harger), Huntington and Kent (Eames), Salisbury (Bissell). June — July.

Carex albolutescens Schwein. (yellowish-white).

Carex straminea Willd., var. *foenea* Torr.

Carex straminea Willd., var. *cumulata* Bailey.

Locally plentiful near the coast in bogs and moist sandy ground in New London County; has been found also on the top of Bald Hill at 1200 ft. elevation, Union (Graves). July.

Carex mirabilis Dewey (wonderful).

Carex straminea Willd., var. *mirabilis* Tuckerm.

Occasional or frequent. Fields and copses, in either dry or moist ground. June.

The var. *PERLONGA* Fernald (very long) is occasional, usually in dry ground.

Carex mirabilis Dewey, var. *tincta* Fernald (dyed).

Rare. Dry open woods: East Hartford (Weatherby). June.

Carex straminea Willd. (straw-colored).

Carex tenera Dewey.

Rare. Woods and fields in wet sandy soil: Griswold (Graves), Thompson, West Hartford and Salisbury (Bissell), Ellington and East Hartford (Weatherby), Norfolk (Weatherby & Bissell). June.

Carex hormathodes Fernald (necklace-like).

Carex tenera of Britton's Manual, not Dewey.

Carex straminea Willd., var. *aperta* W. Boott.

In and about marshes. Rare inland: Killingly (Bissell). Frequent along the coast. June.

The var. *INVISa* (W. Boott) Fernald (unseen), *Carex straminea* Willd., var. *invisa* W. Boott, occurs on the coast and is frequent in Fairfield County (Eames).

Carex hormathodes Fernald, var. **Richii** Fernald.

Rare or occasional. Wet ground throughout. June.

Carex Bicknellii Britton.

Rare or local. In meadows or on shaded ledges, in either dry or moist ground: Sprague and Colchester (Graves), Thompson and Franklin (R. W. Woodward), East Hartford (Weatherby), Glastonbury and Southington (Bissell), Orange (Harger). June—July.

Carex silicea Olney (flinty).

Frequent on dunes and sandy beaches along the coast. July.

Carex alata Torr. (winged).

Carex straminea Willd., var. *alata* Bailey.

Rare. In wet ground: Hartford (A. W. Driggs), Southington (Bissell). June.

Carex festucacea Schk. (fescue-like), var. **brevior** (Dewey) Fernald (shorter).

Carex festucacea Britton in part.

Carex straminea Willd., var. *brevior* Dewey.

Frequent or common. Dry sandy fields. June.

Carex Bebbii Olney.

Rare. Salisbury, marshy border of ponds and sloughs (Mrs. C. S. Phelps & A. E. Blewitt). June.

Carex foenea Willd. (hay-like).

Occasional. Dry rocky woods. June—July.

The var. *PERPLEXA* Bailey (confused) occurs at East Lyme (Graves), and at Southington (Andrews).

Carex aenea Fernald (brassy).

Rare. Salisbury, dry exposed ledges on Mt. Riga (Weatherby & Bissell). June.

Carex stellulata Good. (star-shaped).

Carex echinata Murr., var. *microstachys* Boeckl.

Carex sterilis of American authors, not Willd.

Frequent. Wet meadows and swamps. Late May—June.

Carex stellulata Good., var. *ormantha* Fernald (having a necklace-shaped inflorescence).

Rare. Wet places, growing with the typical form. June.

Carex stellulata Good., var. *excelsior* (Bailey) Fernald (taller).

Carex sterilis Willd., var. *excelsior* Bailey.

Occasional. Bogs and wet meadows. June.

Carex stellulata Good., var. *cephalantha* (Bailey) Fernald (having its flowers in a head).

Carex sterilis Willd., var. *cephalantha* Bailey.

Carex echinata Murr., var. *cephalantha* Bailey.

Occasional. Borders of swamps. June.

Carex stellulata Good., var. *angustata* Carey (narrow).

Carex echinata Murr., var. *angustata* Bailey.

Rare or local. Bogs and swamps: Ledyard and Waterford (Graves), East Hartford (A. W. Driggs & Bissell), Oxford (Harger), Huntington (Eames). June.

Carex sterilis Willd. (sterile).

Carex echinata Murr., var. *conferta* Bailey.

Carex atlantica Bailey.

Swampy places. Rare over most of the state: New London (Graves), Woodstock (R. W. Woodward & Weatherby), East Windsor and Southington (Bissell). Frequent near the coast in the vicinity of Bridgeport (Eames). June.

Carex scirpoides Schk. (like *Scirpus*, the Bulrush).

Carex interior Bailey.

Open swamps and peat bogs. Rare in eastern and central districts: Thompson (R. W. Woodward & Weatherby),

Waterford (Graves), Lyme (Dr. E. J. Thompson), Bolton (Weatherby), South Windsor (A. W. Driggs & Bissell), Southington (Andrews & Bissell), New Haven (Harger). Becoming occasional in the western part of the state. Late May—June.

Carex scirpoides Schk., var. *capillacea* (Bailey) Fernald (hair-like).

Carex interior Bailey, var. *capillacea* Bailey.

Shaded bogs. Rare in most parts of the state: Huntington (Eames), Thompson, Southington and East Haven (Bissell). Occasional in New London County (Graves). June.

Carex seorsa E. C. Howe (separate).

Wet shaded ground. Rare or local in most parts of the state: Bolton (A. W. Driggs), East Hartford (Weatherby), New Haven (R. W. Woodward), Southington (Andrews), Stratford (Eames), Oxford (Harger), Litchfield (Bissell). Occasional in New London County (Graves). June.

Carex canescens L. (somewhat hoary).

Rare. Wet woods and sphagnum bogs: Thompson, Southington and Norfolk (Bissell). June.

Carex canescens L., var. *subloliacea* Laestad. (somewhat like *Lolium*, the Tare).

Rare. Wet woods: Southington (Bissell). June.

Carex canescens L., var. *disjuncta* Fernald (disjoined).

Carex canescens in part and of most authors.

Frequent. Shaded swamps, wet bogs and beside brooks, often in shallow water. June.

Carex brunnescens Poir. (brownish).

Carex canescens L., var. *vulgaris* Bailey.

Carex canescens L., var. *alpicola* Wahlenb.

Rare. Cool mossy woods and shaded peat bogs: Wallingford (Harger), Winchester and Salisbury (Bissell). June.

Carex bromoides Schk. (like the Brome Grass).

Wet woods, shaded swamps and in springy places. Rare in eastern districts: Union (Bissell), East Haddam (Graves). Becoming occasional or frequent westward. June.

Carex Deweyana Schwein.

Rare. Woodland hillsides in rich, rather dry soil: Watertown (Harger), Colebrook (J. W. Robbins), Winchester (Weatherby & Bissell), Southington, Torrington, Canaan and Salisbury (Bissell), Danbury and Ridgefield (Eames), Cornwall (E. E. Brewster). June.

Carex trisperma Dewey (three-seeded).

Occasional. Cool bogs and sphagnum swamps. June — July.

Carex tenella Schk. (delicate).

Rare. Cool mossy woods: Waterford (Graves), Stafford (Weatherby & Bissell), Manchester (Weatherby), Norfolk (J. W. Robbins, 1828; Bissell), Barkhamsted and Cornwall (Bissell). June — July.

Carex rosea Schk. (rose-like).

Frequent. Rich woods and thickets or sometimes in open ground. June.

Carex rosea Schk., var. *radiata* Dewey (radiate).

Frequent. Woods, copses and meadows in either dry or moist ground. June.

Carex rosea Schk., var. *minor* Boott (smaller).

Rare. Woods or in open ground, more often in dry soil: Norwich (W. A. Setchell), East Hartford (A. W. Driggs), Farmington (Andrews), Southington (Andrews, Bissell), Plainville and Wolcott (Bissell). June.

Carex retroflexa Muhl. (bent backward).

Carex rosea Schk., var. *retroflexa* Torr.

Woods, copses and open ground, mostly in dry soil. Rare in northern and eastern districts: Ledyard (Graves), Norwich (W. A. Setchell), Scotland and Middlefield (Weatherby), Windsor (Bissell, A. W. Driggs), Southington (Andrews & Bissell), Oxford (Harger). Becoming frequent in the southwestern part of the state (Eames). June.

Carex Muhlenbergii Schk.

Frequent. Dry sterile soil. June — July.

The var. *ENERVIS* Boott (nerveless), var. *xalapensis* Britton, is rare inland: Franklin (R. W. Woodward), Killingly and Plainville (Bissell), Southington (Andrews), Oxford (Harger). Becoming occasional or frequent near the coast.

Carex cephalophora Muhl. (head-bearing).

Frequent. Dry soils, often in woods. July.

Carex sparganioides Muhl. (like *Sparganium*, the Bur-reed).

Rich woods, more often in rocky places. Rare in eastern districts: Norwich and Franklin (Graves), Bolton (A. W. Driggs). Becoming occasional or local westward. June.

Carex cephaloidea Dewey (head-like).

Rare or occasional. Rich shaded ground, more often in moist alluvium. June.

Carex vulpinoidea Michx. (like *Carex vulpina*, the Fox Sedge).

Common. Open ground, usually in moist but sometimes in dry places. June—July.

Carex setacea Dewey (bristle-like), var. **ambigua** (Barratt) Fernald (doubtful).

Carex xanthocarpa Bicknell.

Carex xanthocarpa Bicknell, var. *annectens* Bicknell.

Occasional or frequent. Fields and meadows, either dry or moist. June—July.

Carex diandra Schrank (two-stamened).

Carex teretiuscula Good.

Local. In bogs: New Haven (O. D. Allen), Salisbury (Bissell). June.

Carex diandra Schrank, var. **ramosa** (Boott) Fernald (branching).

Carex teretiuscula Good., var. *ramosa* Boott.

Carex teretiuscula Good., var. *prairea* Britton.

Rare. Bogs and swamps: Salisbury (M. L. Fernald). June.

Carex stipata Muhl. (crowded).

Common. Swamps and wet meadows. June.

Carex crinita Lam. (long-haired).

Swamps and wet places. Rare in New London County: Stonington and East Lyme (Graves). Frequent or common elsewhere. June.

Carex crinita Lam., var. **gynandra** (Schwein.) Schwein. & Torr. (gynandrous).

Carex gynandra Schwein.

Occasional or frequent. Swamps and wet places. June.

Carex aquatilis Wahlenb. (aquatic).

Rare. Wet meadows or cold bogs: Lyme and Oxford (Harger), Salisbury (M. L. Fernald). June.

Carex torta Boott (twisted).

Banks of rivers and swift flowing streams. Rare near the coast: Lyme (Graves), Darien (Harger & Eames). Becoming frequent northward and common in the northwestern part of the state. May.

Roots very long and tough, the plant forming dense tufts or beds. The fruit ripens early and falls very quickly.

Carex stricta Lam. (straight).

Sword Grass. Nigger-heads.

Very common. Swales, wet meadows and about ponds, often forming large tussocks. June.

One of the best known and most plentiful of our sedges. Largely cut as bedding for stock.

Carex stricta Lam., var. *curtissima* Peck (very short).

Rare. In swamps: Waterford (Graves), Lyme (Weatherby). June.

Carex stricta Lam., var. *angustata* (Boott) Bailey (narrow).

Carex stricta Lam., var. *xerocarpa* Britton.

Wet meadows and in marshes. Rare in most districts: Voluntown (Graves), Southington (Andrews), Windsor and Salisbury (Bissell). Locally plentiful in marshes along the lower Housatonic River (Eames). June.

Carex stricta Lam., var. *decora* Bailey (elegant).

Carex Haydeni Dewey.

Rare. Low meadows: Franklin and Waterford (Graves), East Hartford (Weatherby), Glastonbury and Southington (Bissell). June.

Carex aurea Nutt. (golden).

Rare or local. Bloomfield, low field on outcrops of sandstone (Weatherby), Kent, moist calcareous rocks on the banks of the Housatonic River (Eames & J. Pettibone), Kent, wet upland pasture (Eames), Salisbury, moist meadows (Miss E. L. Shaw). June—July.

Carex pauciflora Lightf. (few-flowered).

Rare. Norfolk, sphagnum swamp (J. W. Robbins, 1827; Bissell). June.

Carex leptalea Wahlenb. (delicate).

Carex polytrichoides Muhl.

Frequent. Wet mossy woods and grassy swamps. May—June.

Carex polygama Schk. (polygamous).

Carex fusca Gray's Manual ed. 6, not All.

Local. Wet meadows and open swamps: New London and Franklin (Graves), Bolton, East Hartford and Bloomfield (Weatherby), East Windsor and Southington (Bissell), Plainville (J. N. Bishop), Hamden (A. L. Winton), Milford (Eames). May.

Carex triceps Michx. (three-headed), var. **hirsuta** (Willd.) Bailey (hairy).

Carex triceps Britton in part, not Michx.

Fields and roadsides in sandy soil, either dry or moist: Old Lyme (Graves), Salisbury (Bissell). Frequent in central and southwestern Connecticut. June.

Carex virescens Muhl. (greenish).

Carex virescens Muhl., var. *costata* Dewey.

Carex costellata Britton.

Frequent. Dry woods and clearings, often in leaf-mold. July.

Carex virescens Muhl., var. **Swanii** Fernald.

Carex virescens of American authors.

Common. Dry woods and open grassy places. July.

Carex formosa Dewey (handsome).

Rare. Meadows and wooded hillsides in rich moist soil: Salisbury (J. R. Churchill). Late May—June.

Carex Davisii Schwein. & Torr.

Rare. Alluvial soil, along river banks or borders of low thickets: Windsor (A. W. Driggs), East Hartford (Weatherby), Lyme and Chester (R. W. Woodward & Graves). June.

Carex gracillima Schwein. (very delicate).

Frequent. Moist woods, thickets and meadows. June.



Carex aestivalis M. A. Curtis (of summer).

Rare. Salisbury, rocky woodland hillside (A. E. Blewitt).
June—July.

Carex Willdenowii Schk.

Rare. Dry woods: East Haven (Harger), Hamden (J. A. Allen). Late May—early June.

Carex umbellata Schk. (bearing umbels).

Open ground, in dry sandy or rocky places. Occasional or frequent near the coast, becoming rare or local northward, reaching Woodstock (R. W. Woodward & Harger), Bolton (A. W. Driggs) and Barkhamsted (Harger). May.

The var. *TONSA* Fernald (clipped) occurs at North Stonington, rocky slope of Lantern Hill (Graves).

Carex nigro-marginata Schwein. (black-margined).

Rare. North Stonington, dry rocky slope of Lantern Hill (Graves). May.

Carex communis Bailey (growing in colonies).

Carex pedicellata Britton.

Carex pedicellata Britton, var. *Wheeleri* Britton.

Carex communis Bailey, var. *Wheeleri* Bailey.

Occasional or frequent. Rocky woods and on shaded banks. May—June.

Carex varia Muhl. (variable).

Occasional or frequent. Rocky or sandy woods and clearings. May—June.

The var. *COLORATA* Bailey (colored) occurs with the typical form.

Carex pennsylvanica Lam.

Common. Dry sandy or sterile soil, in woods and in open ground. May.

One of the most abundant species of the genus.

Carex pennsylvanica Lam., var. *lucorum* (Willd.) Fernald (of groves).

Rare or local. Dry or moist woods: West Hartford (Dr. E. J. Thompson), Meriden (Andrews), Southington (Bisell, Andrews), Fairfield (Eames). Late May—June.



Carex pubescens Muhl. (downy).

Woods, thickets and half-shade, usually in moist rich soil.
Rare in New London County: North Stonington (Graves).
Becoming occasional along the coast westward and frequent in
northern districts. Late May—June.

Carex livida (Wahlenb.) Willd. (pale lead-color).

Rare. In bogs: New Haven (C. N. Shepard, 1830; O. D.
Allen). May—June.

Carex panicea L. (like the Panic Grass).

Rare or local. Fields and meadows: New Haven (O. D.
Allen), Orange (Eames & C. C. Godfrey). May—June.
Native or possibly naturalized from Europe.

Carex tetanica Schk. (rigid).

Rare or local. Woods and rocky woods: Waterford
(Graves), Sherman (E. H. Austin & Eames), Salisbury (M.
L. Fernald). Late May—June.

The var. *WOODII* (Dewey) Bailey occurs at Salisbury, in
a cool shaded bog (M. L. Fernald).

Carex polymorpha Muhl. (of many forms).

Rare. East Lyme, low woods (Graves), New Haven,
marshes (J. A. Allen, Andrews). June.

Carex pallescens L. (rather pale).

Common. Woods, fields and meadows, either wet or 'dry.
May—June.

Carex paupercula Michx. (stunted), var. *pallens* Fernald
(pale).

Carex Magellanica of Gray's Manual ed. 6 in part, not Lam.

Local. Norfolk, plentiful in a sphagnum bog (Bissell).
June.

Carex limosa L. (growing in mud).

Rare. Sphagnum bogs: Burlington and Salisbury (Bis-
sell), Norfolk (J. W. Robbins, 1828; Weatherby). June.

Carex littoralis Schwein. (of the sea-shore).

Rare or local. Swampy woods in sandy soil: East Windsor
and South Windsor (Bissell), East Hartford (Weatherby),
Windsor (A. W. Driggs), Stratford (Harger). Late May—
early June.

Carex prasina Wahlenb. (leek-green).

Occasional. Along woodland brooks and in shaded swampy places. June.

Carex eburnea Boott (ivory-like).

Carex setifolia Britton.

Dry shaded ledges. Frequent in the limestone district of northwestern Connecticut, extending southward as far as New Milford (Eames). Rare or local among the trap hills of the Connecticut Valley: Plainville (Bissell), Southington (Andrews & Bissell), Durham (Harger). May—June.

Carex pedunculata Muhl. (stalked).

Rare, local or occasional. Wooded banks, in rich soil either moist or dry: Franklin (Graves), Stafford (Weatherby & Bissell), Manchester (A. W. Driggs), Windsor, Barkhamsted and Salisbury (Bissell), Meriden (D. C. Eaton), Oxford and Southbury (Harger), Monroe (H. C. Beardslee), Weston (Eames & C. C. Godfrey), Cornwall (E. E. Brewster). Late April—early May.

The fruit falls very quickly on ripening.

Carex plantaginea Lam. (like Plantago, the Plantain).

Rare or local. Moist rich woods: North Branford (O. Harger), Colebrook (J. W. Robbins, 1828), Norfolk (Weatherby & Bissell), Torrington and Salisbury (Bissell), Sherman (C. K. Averill). May.

Carex platyphylla Carey (broad-leaved).

Rocky hillsides in rich woods, usually in dry soil. Rare or absent near the coast: Wilton (Miss A. E. Carpenter), Huntington (Eames). Becoming occasional or frequent northward and common in the limestone district of northwestern Connecticut. May.

Carex laxiculmis Schwein. (loose-stalked).

Frequent. Woods and half-shade, usually in rich soil. June.

Carex digitalis Willd. (of a finger).

Common. Rich woods and glades, more often in rather dry soil. June.

Carex ptychocarpa Steud. (having folds on the fruit).

Rare. Waterford, in rocky woods (Graves). June.

Carex laxiflora Lam. (loose-flowered).

Rich woods. Rare in northern and eastern Connecticut, becoming occasional or frequent in Fairfield County. Late May — June.

Carex laxiflora Lam., var. **gracillima** Boott (very slender).

Rare. Borders of moist thickets: Oxford (Harger), Litchfield (Bissell). Late May.

Carex laxiflora Lam., var. **patulifolia** (Dewey) Carey (with spreading leaves).

Occasional or frequent. Rich woods or thickets. Late May — early June.

Carex laxiflora Lam., var. **styloflexa** (Buckley) Boott (having bent styles).

Carex styloflexa Buckley.

Rare. Rocky or moist woods or in sphagnum swamps: Lyme (Graves), East Haddam (Weatherby), New Haven (J. A. Allen), Southington (Bissell), Oxford (Harger), Fairfield (Eames). June.

Carex laxiflora Lam., var. **varians** Bailey (varying).

Occasional. Rich woods and thickets. Late May — June.

Carex laxiflora Lam., var. **blanda** (Dewey) Boott (agreeable).

Carex laxiflora Lam., var. *striatula* Carey.

Frequent or common. Rich open woods or in half-shade, in either dry or moist ground. Late May — June.

Carex laxiflora Lam., var. **latifolia** Boott (broad-leaved).

Carex albursina Sheldon.

Rare or local. Moist rich woods: Groton and Waterford (Graves), East Haven and Salisbury (Bissell), Southington (Andrews & Bissell), Seymour (Harger), Oxford (R. W. Woodward & Eames), Winchester (Weatherby & Bissell). May — early June.

Carex laxiflora Lam., var. **leptonervia** Fernald (delicately nerved).

Rare. Wet woods or sphagnum bogs: Franklin (R. W. Woodward), West Hartford and Winchester (Bissell). May — June.

Carex Hitchcockiana Dewey.

Rare or local. Rocky hillsides in rich woods: Middlefield (R. W. Woodward), Southington (Andrews & Bissell), Plainville and Farmington (Bissell). June.

Carex oligocarpa Schk. (few-fruited).

Rare. Shaded ledges in rich woods: Colebrook (J. W. Robbins, 1828), Salisbury (M. L. Fernald). June.

Carex conoidea Schk. (cone-shaped).

Common. Moist meadows and wet places. June.

Carex grisea Wahlenb. (gray).

Occasional. Woods and meadows in rich soil. June.

The var. *RIGIDA* Bailey (rigid), var. *angustifolia* Gray's Manual ed. 6, not Boott, is rare over most of the state: Southington, Torrington and North Canaan (Bissell). Occasional in Fairfield County (Eames).

Carex glaucoidea Tuckerm. (gray-green).

Rare. Rich or rocky woods and fields or in moist meadows: Ledyard and Groton (Graves), Franklin (R. W. Woodward), Hartford and West Hartford (A. W. Driggs), Meriden (Andrews), Woodbridge (O. D. Allen). June.

Carex granularis Muhl. (granular).

Rare or local. Moist meadows: East Haven, Meriden and Oxford (Harger), New Haven (D. C. Eaton), Southington (Andrews & Bissell), Bloomfield and North Canaan (Bissell), Ridgefield and Kent (Eames & C. C. Godfrey). June.

Carex granularis Muhl., var. *Haleana* (Olney) Porter.

Carex granularis Muhl., var. *Shriveri* Britton.

Carex Shriveri Britton.

Rare. Wet meadows and pastures: Ridgefield (Eames & C. C. Godfrey), Salisbury (M. L. Fernald & Bissell). June.

Carex Crawei Dewey.

Rare. Moist fields and meadows: Salisbury (Mrs. C. S. Phelps & Weatherby). June—July.

Carex flava L. (yellow).

Low fields and meadows. Rare or absent in most districts: Berlin (N. Coleman), Ridgefield (Eames & C. C. Godfrey). Frequent or common in Litchfield County. June.

Carex flava L., var. *rectirostra* Gaudin (straight-beaked).

Carex flava L., var. *graminis* Bailey.

Local. Swamps and wet meadows: Woodstock (Harger), Ashford and Stafford (Weatherby & Bissell), Union and Colchester (Graves). June — July.

Carex flava L., var. *elatio*r Schlecht. (taller).

Rare. Low ground: Ridgefield and Kent (Eames & C. C. Godfrey). June.

Carex Oederi Retz., var. *pumila* (Cosson & Germain) Fernald (dwarf).

Carex flava L., var. *viridula* Bailey.

Carex viridula Michx.

Rare. East Haven, in moist meadows (Harger); New Haven, in salt marsh (D. C. Eaton); Kent, in sand on shore of pond (Eames); Salisbury, in wet ground (Mrs. C. S. Phelps). June — July.

Carex longirostris Torr. (long-beaked).

Rich rocky woods in either moist or dry places, or on river banks. Local from the Connecticut River westward except near the coast in the southwestern part of the state where it is not reported. Late May — June.

Carex castanea Wahlenb. (chestnut-colored).

Rare. Alluvial soil: Salisbury (J. Young, 1828). Apparently has not been collected since that date. June.

Carex arctata Boott (contracted).

Rare. Hillsides in rich woods: Bridgeport (Eames), Barkhamsted, Norfolk and Canaan (Bissell), Cornwall (Harger). May.

Carex debilis Michx. (weak), var. *Rudgei* Bailey.

Carex tenuis Rudge.

Frequent. Dry or moist woods and in meadows. June — July.

Carex debilis Michx., var. *interjecta* Bailey (thrown between).

Rare. Rocky woods: Southington (Andrews & Bissell). June — July.

Carex scabrata Schwein. (rough).

Local or occasional. Wet woods, about springs and along streams. July.

Carex filiformis L. (thread-like).

Open swamps and bogs. Local in the northern part of the state: Woodstock (Weatherby), Union and East Granby (Weatherby & Bissell), Burlington and Salisbury (Bissell). Becoming frequent southward. June.

Carex lanuginosa Michx. (woolly).

Carex filiformis L., var. *latifolia* Boeckl.

Wet meadows, bogs and about ponds. Rare in New London County: Norwich (W. A. Setchell), Waterford and Franklin (Graves). Frequent elsewhere. June.

Carex vestita Willd. (clothed).

Frequent or common. Sandy soils, either dry or moist. June.

Carex oligosperma Michx. (few-seeded).

Rare. Groton, in peat bogs (Graves), South Windsor (A. E. Blewitt). June—July.

Carex trichocarpa Muhl. (with hairy fruit).

Local. Thomaston, in wet ground (A. E. Blewitt). June—July.

Carex riparia W. Curtis (of river banks).

Occasional or local. Wet meadows and swamps. June.

Carex squarrosa L. (with spreading scales).

Rare or local. Wet meadows and pastures: Guilford (G. H. Bartlett), Chester (R. W. Woodward & Harger), North Branford and East Haven (Harger), New Haven (G. G. Merrell), Middletown (J. Barratt), Southington (Andrews & Bissell). June—July.

Carex typhina Michx. (like Typha, the Cat-tail).

Carex typhinoides Schwein.

Rare. Wet alluvium and in meadows: Guilford (G. H. Bartlett), East Haven (Eames), East Hartford (A. W. Driggs), Hartford (Harger, H. S. Clark & Bissell). June—July.

Carex Pseudo-Cyperus L. (false Cyperus).

Rare. Salisbury, muddy border of Twin Lakes (Mrs. C. S. Phelps & Bissell). June—July.

Carex comosa Boott (having tufts of hair).

Carex Pseudo-Cyperus L., var. *americana* Hochst.

Occasional. Swamps and wet places along streams. June—July.

Carex hystericina Muhl. (porcupine-like).

Rare or local. Wet springy pastures and meadows and in swales: Lyme (H. S. Clark), Manchester (Weatherby), Southington (Andrews & Bissell), Prospect, Oxford and Southbury (Harger), Stafford, Sharon and Salisbury (Bissell). June—July.

The var. *COOLEYI* Dewey, var. *Dudleyi* Bailey, occurs at Wethersfield (C. Wright), Southington and Sharon (Bissell).

Many reports of this species should be referred to *Carex lurida*.

Carex lurida Wahlenb. (dingy brown or yellow).

Carex lurida Wahlenb., var. *flaccida* Bailey.

Carex lurida Wahlenb., var. *parvula* Bailey.

Carex lurida Wahlenb., var. *exundans* Bailey.

Common. Swamps and wet places. July—Aug. A hybrid of this with *Carex lupulina* has been found at Groton and Lyme (Graves).

Very variable with several intergrading forms.

Carex lurida Wahlenb., var. *gracilis* (Boott) Bailey (slender).

Carex Baileyi Britton.

Rare. East Lyme, in bogs (Graves). July—Aug.

Carex Schweinitzii Dewey.

Rare. Salisbury, in open swamps and wet meadows: (M. L. Fernald). June.

Carex retrorsa Schwein. (turned backward).

Rare or local. Wet meadows or in moist alluvial soil: Lyme (Graves), Huntington (Harger), Salisbury (Bissell). June—July. A supposed hybrid of this with *Carex rostrata* was found in Connecticut many years ago by Charles Wright.

Carex lupuliformis Sartwell (hop-shaped; referring to the head of fruit).

Carex lupulina Muhl., var. *polystachya* Schwein. & Torr.

Rare. Bogs or shaded swamps: Southington (Andrews & Bissell), Huntington and Monroe (Eames). Aug.—Sept.

Carex lupulina Muhl. (like *Lupulus*, the Hop).

Frequent or common. Swamps and wet ground. July — Aug.

Carex lupulina Muhl., var. *pedunculata* Dewey (stalked).

Local or occasional. Swamps, growing with the typical form. July — Aug.

Carex Grayii Carey.

Carex Asa-Grayi Bailey.

Alluvial soil along streams or in moist rich ground. Local along the Connecticut River: Lyme (Graves), Haddam (H. S. Clark & Bissell), East Hartford (Weatherby). Rare elsewhere: Middletown, at Westfield, and Southington (Andrews & Bissell), Salisbury (G. H. Bartlett). June.

Carex Grayii Carey, var. *hispidula* Bailey (minutely hispid).

Local. Hartford, alluvial soil on bank of the Connecticut River (H. S. Clark & Bissell). June.

Carex intumescens Rudge (swollen).

Frequent. Swamps and wet places. June — July.

Carex intumescens Rudge, var. *Fernaldii* Bailey.

Rare. Salisbury, in rocky woods (A. E. Blewitt).

Carex folliculata L. (like a small bag).

Frequent. Wet boggy meadows and swampy woods. June — Aug.

Carex vesicaria L. (bladdery).

Carex monile of Gray's Manual ed. 6, not Tuckerm.

Occasional. Low meadows, borders of ponds and near river banks. June.

The var. *MONILE* (Tuckerm.) Fernald (necklace), *Carex monile* Tuckerm., is occasional. The var. *JEJUNA* Fernald (insignificant) occurs rarely with the species. The var. *DISTENTA* Fries (swollen) is rare: East Hartford (Weatherby), Windsor (H. S. Clark & Bissell).

Carex rostrata Stokes (beaked).

Carex utriculata Boott, var. *minor* Boott.

Swamps and wet meadows or in shallow water. Rare over most of the state: Waterford (Graves), Plainville, Woodbridge and Oxford (Harger), Monroe (Eames). Occasional in Litchfield County (Bissell). June—July.

Carex rostrata Stokes, var. *utriculata* (Boott) Bailey (bottle-like).

Carex utriculata Boott.

Peat bogs and wet meadows. Rare in most districts: Stratford (Eames), New Haven and Monroe (Harger), East Granby and Putnam (Weatherby), Glastonbury and Thompson (Bissell). Occasional in New London County (Graves). June—July.

Carex bullata Schk. (having bubbles or blisters).

Carex bullata Schk., var. *Olneyi* Bailey.

Rare. Voluntown, in Great Cedar Swamp (Graves). June—July.

Carex bullata Schk., var. *Greenii* (Boeckl.) Fernald.

Carex bullata of Manuals.

Local. In swamps: Voluntown, Stonington and Colchester (Graves), Columbia (Weatherby), Ellington (F. N. Pease). June—July.

Carex Tuckermani Dewey.

Rare or local. Moist alluvial soil on banks of rivers and coves: Windsor (A. W. Driggs), Hartford (C. Wright), Southington (Andrews, Bissell), Southbury (Harger), Torrington and Salisbury (Bissell), Canaan (J. W. Robbins, 1828). June—July.

ARACEAE. ARUM FAMILY.

ARISAEMA Martius. Dragon Arum. Indian Turnip.

Arisaema triphyllum (L.) Schott (three-leaved).

Arisaema triphyllum Schott, var. *pusillum* Peck.

Arisaema pusillum Nash.

Jack-in-the-Pulpit. Indian or Wild Turnip.

Common. Rich or moist woods. Late April—May; fruit late Aug.—Nov.

The corm or tuber is intensely acrid, but this property is lost upon being heated, leaving 10 to 18% of starch. The corm is medicinal.

Arisaema Dracontium (L.) Schott (classical name for some species of Arum).

Green Dragon. Dragon Root.

Low grounds near streams and rivers. Rare in the eastern part of the state, becoming occasional westward. May—June; fruit Aug.—Sept.

PELTANDRA Raf. Arrow Arum.

Peltandra virginica (L.) Kunth.

Peltandra undulata Raf.

Arrow Arum.

Occasional or frequent. Shallow water of ponds and streams and sometimes in bogs. June—July; fruit Sept.—Oct.

CALLA L. Water Arum.

Calla palustris L. (of marshes).

Wild or Marsh Calla.

Occasional or local. Cold bogs and shaded swamps, sometimes forming extensive colonies. May—June; fruit July—Sept.

The rootstocks are edible after an acrid principle they contain has been dissipated by cooking, and they are said to be sometimes used for food in parts of Europe. The Calla Lily of cultivation is not a true *Calla*, but is a species of the genus *Richardia*.

SYMPLOCARPUS Salisb. Skunk Cabbage.

Symplocarpus foetidus (L.) Nutt. (ill-smelling).

Spathyema foetida Raf.

Skunk Cabbage.

Common. Wet ground. March—April; fruit July—Sept., persisting into the winter.

The rootstocks are reputed to have medicinal value.

ORONTIUM L. Golden Club.**Orontium aquaticum L.** (aquatic).

Golden Club.

Occasional or local. Mostly in shallow waters of the larger rivers and their tributaries where extensive colonies are often formed; sometimes in swamps and along small streams. May — early June; fruit June — July.

The seeds and rootstocks are said to have been used for food by the Indians after destroying, by cooking, the acrid principle which they contain.

ACORUS L. Sweet Flag. Calamus.**Acorus Calamus L.** (classical name for some Reed).

Sweet Flag. Calamus.

Frequent. Wet meadows, swamps and borders of ponds and streams, often forming large colonies. May — June.

The aromatic rootstock is often candied, is of some medicinal value and is officinal.

LEMNACEAE. DUCKWEED FAMILY.**SPIRODELA** Schleid.**Spirodela polyrhiza (L.) Schleid.** (many-rooted).

Greater Duckweed.

On still water of ponds and pools. Occasional in the southeastern part of the state; frequent or locally common elsewhere. July — Aug.

Rarely seen in flower.

LEMNA L. Duckweed. Duck's-meat.**Lemna trisulca L.** (three-furrowed).

Duck's-meat.

Still or running water. Rare in the south central, occasional in the southwestern, frequent to common in the northern and western parts of the state; not reported from the eastern portion. July.

Lemna valdiviana Philippi.*Lemna cyclostasa* of authors.

Shallow water of ponds and rapid waters of brooks and rivers. Occasional in the southeastern, locally common in the

southwestern part of the state; apparently rare elsewhere. June—July, but neither flowers or fruit seen here.

Often occurs in large tangled strings, balls and irregular masses, either floating free or clinging to twigs and stones.

***Lemna minor* L. (smaller).**

Lesser Duckweed.

Ponds and stagnant water of pools and ditches. Rare in southeastern Connecticut; frequent in Hartford and Litchfield Counties; common in the southwestern part of the state. June—July.

WOLFFIA Horkel.

***Wolffia columbiana* Karst.**

Wolffia.

Local. Surface of ponds, plentiful where it occurs: Woodbury and Ridgefield (Eames & C. C. Godfrey), Kent (Eames), New Milford (J. W. Robbins, 1829), Salisbury (J. W. Robbins, Mrs. C. S. Phelps). June—July.

The plants of this species are the smallest of our flowering plants, being little globules about 1-25th of an inch in diameter.

ERIOCAULACEAE. PIPEWORT FAMILY.

ERIOCAULON L. Pipewort.

***Eriocaulon septangulare* Withering (seven-angled).**

Pipewort.

Borders of ponds and rivers, in either shallow or deep water. Frequent in the southeastern part of the state; occasional elsewhere. July—Sept.

XYRIDACEAE. YELLOW-EYED GRASS FAMILY.

XYRIS L. Yellow-eyed Grass.

***Xyris caroliniana* Walt.**

Occasional or local. Bogs or sphagnum swamps. July—Sept.

***Xyris flexuosa* Muhl. (flexuous).**

Yellow-eyed Grass.

Sandy bogs. Occasional to frequent in most sections but not reported from the southwestern part of the state. July—Sept.

Xyris Smalliana Nash.*Xyris Congdoni* Small.

Rare or local. Borders of ponds or in sandy bogs: Salem (Graves), East Lyme (Miss A. M. Ryon & Graves), Guilford (G. H. Bartlett). Aug.—Sept.

COMMELINACEAE. SPIDERWORT FAMILY.

TRADESCANTIA L. Spiderwort.

Tradescantia virginiana L.

Trinity. Spiderwort. Spider Lily. Job's Tears.

Rare or occasional. Roadsides and waste places, or sometimes in river meadows. In most cases adventive or naturalized from the southeastern United States as an escape from gardens; possibly native at Southbury (Harger) and Fairfield (L. N. Johnson). May — July.

COMMELINA L. Day-flower.

Commelina communis L. (growing in colonies).*Commelina nudiflora* of authors, not L.

Day-flower.

Occasional to frequent. Waste places and cultivated ground as an escape from cultivation; usually in or near cities. July — Nov. Naturalized from the South or from Asia.

PONTEDERIACEAE. PICKEREL-WEED FAMILY.

PONTEDERIA L. Pickerel-weed.

Pontederia cordata L. (heart-shaped).

Pickerel-weed.

Common. Shallow water of ponds and streams. July — Aug.

The var. *ANGUSTIFOLIA* Torr. (narrow-leaved) occurs at Old Lyme (H. S. Clark).

HETERANTHERA R. & P. Mud Plantain.

Heteranthera reniformis R. & P. (kidney-shaped).

Rare. Muddy shores of the Housatonic River at Derby (G. W. Hawes & Harger), and along the river southward to salt water (Eames). Late Aug.—Sept.; fruit Sept.—Oct.

Heteranthera dubia (Jacq.) MacM. (doubtful).*Heteranthera graminea* Vahl.

Water Star Grass.

Rare or local. Shallow water of larger rivers, such as the Connecticut and Housatonic, or sometimes in ponds. July — Sept.

EICHHORNIA Kunth.**Eichhornia crassipes** (Martius) Solms (thick-stemmed).

Water Hyacinth.

Rare. A few plants were found in the Pequonnock River, Bridgeport (C. K. Averill, 1893). June — Aug. Fugitive from Brazil.

The plant is not hardy in this climate, but in Florida it has multiplied in the St. John's river system to such an extent as seriously to obstruct navigation.

JUNCACEAE. RUSH FAMILY.**JUNCUS** L. Rush. Bog Rush.**Juncus bufonius** L. (of toads).

Toad Rush. Toad Grass. Frog Grass.

Frequent to common. Open, moist, sandy places. Fruit mid-June — Aug.

Juncus Gerardi Loisel.

Black Grass.

Common on salt marshes and meadows along the coast. Fruit June — Aug.

Is valued for fodder and constitutes much of the salt hay cut by farmers.

Juncus tenuis Willd. (slender).

Yard Rush. Slender Rush.

Common. Fields, pastures, open woods, roadsides and paths, in either dry or moist ground. Fruit mid-June — Sept.

This species is said to be readily eaten by stock, and when made into hay to contain 7% crude protein.

Juncus tenuis Willd., var. **anthelatus** Wiegand (having a cyme with lateral branches overtopping the central ones).

Rare. Low sandy or grassy places: Southington (Andrews

& Bissell), Lyme (Graves & Bissell), Granby (Weatherby).
Fruit July — Sept.

Juncus tenuis Willd., var. **Williamsii** Fernald.

Rare. Open moist or dry ground: Groton (Graves), Putnam (Weatherby & Bissell), Salisbury (Bissell). Fruit July — Aug.

Juncus secundus Beauv. (one-sided).

Juncus tenuis Willd., var. *secundus* Engelm.

Sandy places and ledgy hillsides, mostly in dry ground. Occasional in most districts but apparently rare in the southwestern part of the state. Fruit July — Sept.

Juncus Dudleyi Wiegand.

Rare. Sandy or sterile ground: Windsor (A. W. Driggs), Meriden (Andrews), South Windsor, Sharon and Salisbury (Bissell). Fruit June — July.

Juncus dichotomus Ell. (forking by pairs).

Rare on borders of salt marshes and in dry open fields near the coast: Groton (Graves), Milford (Harger). Fruit July — Aug.

Juncus dichotomus Ell., var. **platyphyllus** Wiegand (broad-leaved).

Rare. Fields: Groton (Graves). Fruit July — Aug.

Juncus Greenei Oakes & Tuckerm.

Dry, open, generally sandy but sometimes ledgy places. Frequent along the coast; becoming occasional or rare inland, reaching Waterbury (A. E. Blewitt), Southington, on Wolcott Mt. at 900 ft. elevation (Andrews), and Union, on Bald Hill at 1250 ft. elevation (Bissell). Fruit July — Sept.

Juncus effusus L. (loosely spreading).

Bulrush. Common, Soft, Bog, or Candle Rush.

Common. Marshes, low fields and open swamps. Fruit July — Aug.

The var. **compactus** Lejeune & Courtois (pressed together) has been collected at Franklin (R. W. Woodward). Sometimes used for weaving into mats.

Juncus brachycephalus (Engelm.) Buchenau (short-headed).

Juncus canadensis J. Gay, var. *brachycephalus* Engelm.

Rare. Swamps and bogs: Salisbury and Sharon (Bissell).
Fruit Aug.—Sept.

Juncus brevicaudatus (Engelm.) Fernald (short-tailed).

Juncus canadensis J. Gay, var. *brevicaudatus* Engelm.

Juncus canadensis J. Gay, var. *coarctatus* Engelm.

Occasional. Bogs and moist sandy places. Fruit Aug.—Sept.

Juncus canadensis J. Gay.

Juncus canadensis J. Gay, var. *longicaudatus* Engelm.

Frequent. Open swamps and wet meadows. Fruit Aug.—Sept.

Juncus canadensis J. Gay, var. *subcaudatus* Engelm. (somewhat tailed).

Rare or occasional. Low moist ground, often in shade: Sprague and Stafford (Graves), Lyme, East Windsor, Farmington and Southington (Bissell). Fruit Aug.—Sept.

Juncus pelocarpus Mey. (dark-fruited).

Sandy or muddy shores of ponds and streams. Occasional in the southeastern part of the state; apparently rare or local elsewhere. Fruit Aug.—Sept.

Often proliferous.

Juncus militaris Bigel. (soldierly).

Rare or local. Shallow water of ponds: Groton and East Lyme (Graves), Guilford (G. H. Bartlett & Bissell). Fruit July — Sept.

Juncus nodosus L. (knotty).

Knotted Rush.

River banks and moist sandy soil bordering swamps, ponds or small streams. Rare in most districts: Oxford (Harger), Cornwall (R. W. Woodward), Norfolk, Litchfield and Salisbury (Bissell). Occasional along the Connecticut River from East Windsor (Bissell) to Lyme (Graves). Fruit July — Aug.

Juncus brachycarpus Engelm. (short-fruited).

Rare. New London, low ground near Ocean Beach (Graves). Fruit July. A fugitive, probably from the West or South.

Juncus acuminatus Michx. (taper-pointed).

Frequent. Open swamps and wet meadows. Fruit July — Sept.

Often proliferous.

Juncus debilis Gray (weak).

Juncus acuminatus Michx., var. *debilis* Engelm.

Rare. Pond shores and borders of swamps: Waterford and Ledyard (Graves). Fruit Aug.

Juncus articulatus L. (jointed).

Low and moist, mostly sandy places. Occasional to frequent in New London County; rare or occasional in Middlesex, Hartford and Litchfield Counties; not reported elsewhere. Fruit July — Sept.

Juncus articulatus L., var. *obtusatus* Engelm. (blunt).

Rare. Low moist ground: Stafford and Glastonbury (Bissell). Fruit July — Sept.

Juncus marginatus Rostk. (with a distinct border).

Frequent. Grassy places, mostly in moist ground. Fruit July — Sept.

LUZULA DC. Wood Rush.**Luzula saltuensis** Fernald (of forests).

Luzula vernalis Gray's Manual ed. 6, not DC.

Juncoides pilosum Coville, not Kuntze.

Hairy Wood Rush.

Rocky or moist open woods. Occasional in the north-western part of the state (Bissell). Rare elsewhere: Guilford (G. H. Bartlett), North Branford and Watertown (Harger). April — May; fruit May.

Luzula campestris (L.) DC. (of fields), var. *multiflora* (Ehrh.)

Celak. (many-flowered).

Luzula campestris of American authors, not DC.

Juncoides campestre of American authors, not Kuntze.

Common. Woods and fields, in either dry or moist ground. April — May; fruit June — July.

LILIACEAE. LILY FAMILY.

CHAMAEIRIUM Willd. Devil's Bit.**Chamaelirium luteum** (L.) Gray (yellow).*Chamaelirium carolinianum* Willd.

Blazing Star. True Unicorn-root.

Meadows and low woods. Occasional in the southwestern part of the state, becoming rare or local northward and eastward, reaching Salisbury (Bissell), East Haddam (W. E. Selden, Dr. E. J. Thompson). May—June.

The rootstock is medicinal.

MELANTHIUM L.**Melanthium latifolium** Desr. (broad-leaved).*Melanthium racemosum* Michx.

Crisped Bunch-flower.

Rare. Dry woods: Greenwich, at North Greenwich (P. Alcott, 1869). July—Aug.

VERATRUM L. False Hellebore.**Veratrum viride** Ait. (green).

American White Hellebore. Indian Poke. Green Hellebore. Poor Annie.

Frequent to common. Wet woods, open swamps and wet meadows. May—June.

The rootstock is medicinal, is an active poison and is official. The early colonists used the plant as an insecticide.

UVULARIA L. Bellwort.**Uvularia perfoliata** L. (through a leaf; i. e., with leaves clasping the stem).

Bellwort.

Frequent. Dry or moist ground, usually in woods but sometimes occurring in fence-rows or even in fields. May—June.

The root is medicinal and has acquired some local reputation as a remedy against snake bites.

OAKESIA Wats.

Oakesia sessilifolia (L.) Wats. (having leaves without leaf-stalks).

Uvularia sessilifolia L.

Bellwort.

Frequent to common. Woods, thickets and meadows, in either dry or moist ground. May—June.

ALLIUM L. Onion. Garlic.

Allium tricoccum Ait. (having three grains; referring to the three-lobed fruit).

Wild Leek.

Occasional or frequent. Woods, usually in rich but sometimes in sandy soil. Late June—July.

If eaten by cows in the spring, the milk and butter are tainted.

Allium canadense L.

Wild or Meadow Garlic.

Frequent. Meadows bordering streams and rivers, sometimes also in sandy ground and on dry hillsides. June.

Rarely used as a substitute for common garlic.

Allium vineale L. (of vineyards).

Field or Wild Garlic. Wild Onion.

Waste places, grain fields and meadows. Rare in southeastern Connecticut, occasional to frequent elsewhere. Mid-June—July. Naturalized from Europe.

A bad weed, both in pastures, where it taints the milk of animals feeding upon it, and in grain fields, where the bulblets mixing with grain injure it for milling.

HOSTA Tratt. Day Lily. Plantain Lily.

Hosta caerulea (Andr.) Tratt. (sky-blue).

Funkia ovata Spreng.

Blue Day Lily.

Rare. Roadsides near dwellings as an escape from gardens: Montville (Graves), Bridgeport and Fairfield (Eames). July. Native of Japan.

Hosta japonica (Thunb.) Aschers.*Funkia lancifolia* Spreng.

Rare. Escaped from gardens to roadsides: Montville (Graves), Stafford (Bissell). July — Aug. Native of Japan.

HEMEROCALLIS L. Day Lily.**Hemerocallis flava** L. (yellow).

Yellow Day Lily. Lemon Lily.

Rare. Escaped from cultivation to fields and roadsides: Groton, near Poquonnock Lake (Graves, Harger, Bissell et al.), Meriden (Bissell), Westport (Eames), Wilton (Miss A. E. Carpenter). June. Adventive from Europe.

Hemerocallis fulva L. (reddish-yellow).

Common Day Lily.

Frequent. Escaped from cultivation to fields, roadsides and waste places. Mid-June — Aug. Naturalized from Europe.

Troublesome and difficult to eradicate in moist rich ground.

LILIUM L. Lily.**Lilium philadelphicum** L.

Wild Orange-red Lily. Red or Wood Lily.

Frequent. Dry or moist thickets, pastures and open woods. Late June — July.

Lilium superbum L. (superb).

Turk's-cap Lily. Wild Tiger Lily.

Marshes and low fields. Frequent near the coast in the southeastern part of the state, becoming occasional or local westward, reaching Stamford (W. H. Hoyt); not reported far inland. July — Aug.

Lilium canadense L.

Wild Yellow Lily. Canada Lily.

Frequent. Moist meadows, bogs and open swamps. July.

Lilium tigrinum Ker (of tigers).

Tiger Lily.

Rare or occasional. Escaped from gardens to fence-rows, roadsides and waste places. Aug. Adventive from Asia.

In Japan and China the bulbs are eaten.

ERYTHRONIUM L. Dog's-tooth Violet.**Erythronium americanum** Ker.

Yellow Adder's Tongue. Yellow Dog's-tooth Lily or Violet.
Snake-leaf. Trout Lily.

Meadows and rich woods. Local in southeastern Connecticut, common elsewhere. April — May.

Sometimes used as a pot-herb. The dried bulbs, if not kept too long, are said to be nutritious. The leaves and root are medicinal.

ORNITHOGALUM L. Star of Bethlehem.**Ornithogalum umbellatum** L. (umbellate).

Star of Bethlehem. Go-to-Bed-Noon.

Rare or occasional. Escaped from gardens to fields and waste places, mostly near dwellings and in shaded moist ground. May — June. Naturalized from Europe.

MUSCARI Mill. Grape Hyacinth.**Muscari botryoides** (L.) Mill. (like a cluster of grapes).

Grape Hyacinth. Babies' Breath.

Rare. Roadsides and grassland near dwellings, as an escape from cultivation: Norwich (Mrs. E. E. Rogers), East Lyme (Graves), Seymour and Southbury (Harger), New Haven (Eaton Herb.), Milford (Eames & C. C. Godfrey). May. Adventive from Europe.

Muscari racemosum (L.) Mill. (racemose).

Starch Grape Hyacinth. Feather Hyacinth.

Rare or local. Grassland near dwellings: New London and Lyme (Graves), Guilford (G. H. Bartlett), Fairfield (Eames), Stamford (W. H. Hoyt). May. Naturalized from Europe.

Reproduces quite rapidly by forming new bulbs, is very persistent and may give much trouble in lawns.

YUCCA L. Bear Grass. Spanish Bayonet.**Yucca filamentosa** L. (bearing slender threads).

Adam's Needle. Thread-and-Needle.

Rare. Escaped from cultivation to waste ground: Groton

(Harger, Bissell, Graves et al.), Bridgeport and Fairfield (Eames). May—July. Adventive from the South.

The plant yields a strong fiber. The roots form a lather with water and were formerly used in the region where it is plentiful in place of soap.

ASPARAGUS L. Asparagus.

Asparagus officinalis L. (of the shops).

Garden Asparagus.

Frequent along the coast on shores and borders of salt marshes; occasional in fields, waste places and along roadsides inland. June; fruit Aug.—Sept. Naturalized from Europe.

Widely cultivated for its young shoots.

CLINTONIA Raf.

Clintonia borealis (Ait.) Raf. (northern).

Clintonia. Yellow Clintonia.

Rich often swampy woods. Frequent or common in the extreme northwestern part of the state; becoming occasional or rare southward and eastward, reaching Kent (C. K. Averill, E. H. Austin, Eames), Bristol (W. A. Terry), East Hartford and Manchester (A. W. Driggs), Cromwell (F. K. Hallock), Mansfield (Mrs. C. S. Phelps), Hampton (Weatherby), Union (Bissell), Voluntown (Graves). May—early June.

SMILACINA Desf. False Solomon's Seal.

Smilacina racemosa (L.) Desf. (racemose).

Vagnera racemosa Morong.

Wild Spikenard. False Spikenard.

Frequent to common. Rich usually rocky woods, thickets and borders of fields. Mid-May—June; fruit Sept.—Oct.

The root is medicinal.

Smilacina stellata (L.) Desf. (star-shaped).

Vagnera stellata Morong.

Star-flowered Solomon's Seal.

Occasional near the coast in dry or moist, usually sandy ground; rare or local inland on river banks, in swamps or even in dry rocky ground. Mid-May—June.

Smilacina trifolia (L.) Desf. (three-leaved).

Vagnera trifolia Morong.

Three-leaved Solomon's Seal.

Rare or local. Cool sphagnum bogs: Cromwell (Andrews & Bissell), East Hartford (H. S. Clark), Bristol (J. N. Bishop), Colebrook (J. W. Robbins), Norfolk (Miss M. C. Seymour), Salisbury (Bissell). May—June.

MAIANTHEMUM Wiggers.

Maianthemum canadense Desf.

Unifolium canadense Greene.

Wild Lily of the Valley. Two-leaved Solomon's Seal.

Common. Moist or dry woods and thickets. Mid-May—June.

STREPTOPUS Michx. Twisted-stalk.

Streptopus amplexifolius (L.) DC. (having leaves which clasp the stem).

Liver Berry.

Rare or local. Rich moist woods: Salisbury (Bissell, Mrs. C. S. Phelps). May.

Streptopus roseus Michx. (rose-colored).

Liver Berry.

Rich woods, often among rocks. Occasional in the north-western part of the state, becoming local or rare eastward and southward, reaching Somers (Bissell), East Haddam (Dr. E. J. Thompson, Graves), Hamden (D. C. Eaton, Harger), Monroe (Harger). May.

POLYGONATUM Hill. Solomon's Seal.

Polygonatum biflorum (Walt.) Ell. (two-flowered).

Salomonias biflora Farwell.

Small or Hairy Solomon's Seal.

Frequent. Woods and thickets. May—June.

The rootstock is medicinal.

Polygonatum commutatum (R. & S.) Dietrich (variable).

Polygonatum giganteum Dietrich (?).

Salomonias commutata Farwell.

Great, Giant or Smooth Solomon's Seal.

Occasional to frequent. Usually in meadows and alluvial soil near the larger streams; sometimes in rich or dry woods and thickets or on sandy banks. May—June.

The rootstock is medicinal.

CONVALLARIA L. Lily of the Valley.

Convallaria majalis L. (blooming in May).

Lily of the Valley.

Rare. Escaped from cultivation to roadsides, thickets and waste places: New Haven, at East Rock (H. M. Denslow et al.), Southington (Andrews), Oxford (Harger), Stratford (Eames). May. In Connecticut adventive from Europe.

The rootstock and roots are medicinal and are official.

MEDEOLA L. Indian Cucumber-root.

Medeola virginiana L.

Indian Cucumber-root.

Rich woods. Occasional in most parts of the state, becoming common in southwestern Connecticut. May—June.

The rootstock is edible, somewhat resembling cucumber in flavor.

TRILLIUM L. Wake Robin. Birthroot.

Trillium erectum L. (erect).

Purple or Red Trillium. Birthroot. Red Benjamin.

Rich and often rocky woods. Rare or occasional in southeastern Connecticut, becoming frequent northward and westward, and common in the southwestern part of the state. Mid-April—May.

Both white-flowered and yellow-flowered forms are occasionally found. The flowers exhale a very disagreeable odor.

Trillium grandiflorum (Michx.) Salisb. (large-flowered).

Large-flowered White Trillium.

Rare. Weston, in rocky rich woods (Mrs. Mabel Osgood Wright). May.

Trillium cernuum L. (nodding).

Nodding Trillium. White Trillium.

Rich moist woods. Occasional in southeastern and southwestern Connecticut, apparently rare elsewhere. May.

Trillium undulatum Willd. (wavy).

Trillium erythrocarpum Michx.

Painted Trillium.

Rich woods and shaded swamps. Occasional in the north-western part of the state, becoming local or rare eastward and southward, extending to Union (Bissell, Graves), Middletown (M. Hitchcock), New Haven (E. P. Prudden), Oxford (Harger). May.

ALETIS L. Colic-root. Star Grass.

Aletis farinosa L. (mealy).

Colic-root. Star Grass. False Unicorn-root.

Occasional or local. Fields and meadows, or moist sandy places. Late June—July.

The rootstock is medicinal.

SMILAX L. Green Brier. Cat Brier.

Smilax herbacea L. (herbaceous).

Carriion-flower. Jacob's Ladder.

Frequent. Low thickets, borders of meadows and sometimes in drier fields. Late May—June.

The flowers exhale a most offensive odor. The herb is somewhat medicinal. The young shoots are sometimes used as a pot-herb and are called Wild Asparagus.

Smilax rotundifolia L. (round-leaved).

Common Green Brier. Horse, Cat, Bull or Squirrel Brier.

Common. Moist or dry woods, thickets and pastures. Late May—June; fruit Sept., persisting over the winter.

Smilax glauca Walt. (glaucous).

Saw, Cat or Squirrel Brier.

Common. Dry or moist open woods and thickets, often in sandy ground. June; fruit Sept., persisting over the winter.

The roots have been substituted for those of the Brazilian Sarsaparilla.

Smilax hispida Muhl. (rough-hairy).

Rare. Fairfield, in moist thickets (Eames). June.

HAEMODORACEAE. BLOODWORT FAMILY.**LACHNANTHES** Ell. Red-root.

Lachnanthes tinctoria (Walt.) Ell. (used for dyeing).

Gyrotheca capitata Morong.

Gyrotheca tinctoria Salish.

Red-root.

Rare. Open boggy meadows and sandy shores of ponds: East Lyme, several localities (Miss A. M. Ryon & Graves), Madison (W. R. Dudley). Aug.—Sept.

DIOSCOREACEAE. YAM FAMILY.**DIOSCOREA** L. Yam.

Dioscorea villosa L. (hairy).

Wild Yam or Yam-root. Colic-root. Rheumatism-root.

Moist thickets. Frequent along and near the coast and in the valley of the Connecticut River; occasional or rare elsewhere. June—July; fruit Sept.—Oct.

The rootstock is medicinal.

AMARYLLIDACEAE. AMARYLLIS FAMILY.**NARCISSUS** L.

Narcissus Pseudo-Narcissus L. (false Narcissus).

Daffodil.

Rare. Escaped from cultivation to fields and roadsides at East Windsor (Bissell), and at several localities in the southwestern part of the state (Eames). May. Native of Europe.

Narcissus poeticus L. (of poets).

Poet's Narcissus.

Rare. Waste grounds and near old dwellings as an escape from gardens, persistent but not inclined to spread: Oxford (Harger), Fairfield (Eames). May. Native of Europe.

Sometimes occurs in the double-flowered form.

LEUCOJUM L.

Leucojum aestivum L. (of summer).

Summer Snowflake.

Rare. Fairfield, escaped from cultivation to waste grounds in rich moist soil (Eames). Mid-May—mid-June. Adventive from Europe.

HYPOXIS L. Star Grass.**Hypoxis hirsuta** (L.) Coville (hairy).*Hypoxis erecta* L.

Yellow-eyed Grass. Star Grass.

Common. Dry or moist, open or shaded ground. May — Oct.

IRIDACEAE. IRIS FAMILY.**IRIS L.** Fleur-de-lis.**Iris versicolor** L. (of various colors).

Larger Blue or Poison Flag. Fleur-de-lis. Iris. Vegetable Mercury.

Common. Swamps and wet meadows. Mid-May — July.

The rhizome and roots are poisonous and medicinal and are officinal. There have been cases of serious poisoning due to mistaking the roots for those of Sweet Flag.

Iris prismatica Pursh (prism-shaped).

Slender Blue Flag.

Frequent on and near the coast in swamps, meadows and borders of salt marshes; rarely seen farther inland. June — mid-July.

Iris pseudacorus L. (false Acorus).

Yellow Iris.

Rare. Escaped from gardens to marshes and low grounds: Norwich (Mrs. E. E. Rogers), Madison (Miss Roberts), East Haddam (Dr. E. J. Thompson), Stratford (Mrs. R. H. Russell), Fairfield (Eames). Mid-May — June. Adventive from Europe.

Iris orientalis Mill. (of the Orient).Rare. Escaped from cultivation to marshes: Stratford, many plants growing with *Iris pseudacorus* (Mrs. R. H. Russell). Late May — June. Adventive from Asia.**Iris germanica** L.

Fleur-de-lis.

Rare. Escaped from gardens to roadsides and fence-rows: Oxford (Harger), Fairfield (Eames). May — June. Adventive from Europe.

BELAMCANDA Adans. Blackberry Lily.**Belamcanda chinensis** (L.) DC.*Gemmingia chinensis* Kuntze.

Blackberry Lily. Leopard Flower.

Escaped from cultivation to roadsides and waste places, more often in rocky ground. Frequent in the southwestern part of the state, becoming occasional or rare northward and eastward, reaching Danbury (Miss G. L. Northrop), Sharon and Portland (Dr. E. J. Thompson), Berlin (Andrews & Bissell), East Lyme (F. H. Dart), Norwich (Mrs. E. E. Rogers). July — Aug.; fruit Sept. — Nov. Adventive from Asia.

SISYRINCHIUM L. Blue-eyed Grass.**Sisyrinchium albidum** Raf. (whitish).

Rare. New London, one plant in a dry field (Miss E. Coit, 1889). May. Fugitive from the western United States.

Sisyrinchium mucronatum Michx. (having an abrupt, short point).

Meadows and woods, usually in rather dry ground. Occasional in the northwestern part of the state, becoming rare southward and eastward, reaching Newtown (Eames), Oxford (Harger), Plainville and Glastonbury (Bissell). Mid-May — June.

Sisyrinchium angustifolium Mill. (narrow-leaved).

Dry or moist fields. Occasional in the southwestern part of the state; frequent or common elsewhere. Mid-May — June.

Forms intermediate between *Sisyrinchium angustifolium* and *Sisyrinchium gramineum* occur at New London, Groton and Ledyard (Graves), and have been called *Sisyrinchium intermedium* Bicknell.

Sisyrinchium gramineum Curtis (grass-like).*Sisyrinchium anceps* of Gray's Manual ed. 6.*Sisyrinchium graminoides* Bicknell.

Frequent or common. Fields, meadows, thickets and woods, generally in moist ground. June.

Sisyrinchium atlanticum Bicknell.

Fields, meadows and borders of salt marshes. Common on and near the coast; occasional or local inland. June.

Rarely occurs with white flowers.

ORCHIDACEAE. ORCHIS FAMILY.

CYPRIPEDIUM L. Lady's Slipper. Moccasin Flower.**Cypripedium parviflorum** Salisb. (small-flowered).

Smaller Yellow Lady's Slipper.

Rare or occasional. Dry sandy or rocky woods. May — June.

The rootstock and roots are medicinal and are officinal. As in the following variety, contact with this plant poisons the skin of some people, the glandular hairs containing an irritant oil.

Cypripedium parviflorum Salisb., var. **pubescens** (Willd.)

Knight (downy).

Cypripedium pubescens Willd.

Cypripedium hirsutum of authors, not Mill.

Large Yellow Lady's Slipper. Yellow Moccasin Flower. American Valerian.

Rocky woods and cold swamps. Rare in the eastern part of the state and near the coast, becoming occasional or frequent northward and westward. May — June.

The rootstock and roots are medicinal and are officinal.

Cypripedium hirsutum Mill. (hairy).

Cypripedium spectabile Salisb.

Cypripedium reginae Walt.

Showy Lady's Slipper.

Rare or local. Swamps or wet meadows: Willington (Mrs. C. S. Phelps), Milford (Eames), Norfolk (Miss M. C. Seymour), Danbury (H. C. Ryder), Cornwall (E. E. Brewster), Salisbury (Mrs. C. S. Phelps). June.

Cypripedium acaule Ait. (stemless).

Stemless, Pink or Wild Lady's Slipper. Whip-poor-will's Shoe. Wild Valerian.

Frequent. Dry open sandy or rocky woods, often under evergreen trees. May — June.

ORCHIS L.

Orchis spectabilis L. (showy).

Galeorchis spectabilis Rydb.

Showy Orchis.

Rich woods, generally in leaf-mold. Rare near the coast; occasional or local inland. May — early June.

HABENARIA Willd. Rein Orchis. Fringed Orchis.

Habenaria bracteata (Willd.) R. Br. (having bracts).

Coeloglossum bracteatum Parl.

Long-bracted Orchis.

Rare or local. Dry or rocky woods: Killingly (C. H. Knowlton), Somers (Bissell), Middletown (M. Hitchcock), Berlin (Andrews), Meriden (Harger, Andrews), Southington (Andrews, Bissell), New Haven and Hamden (Eaton Herb.), Granby and Simsbury (I. Holcomb), New Milford (E. H. Austin), Kent (C. K. Averill), Salisbury (Mrs. C. S. Phelps). Late May — June.

Habenaria flava (L.) Gray (yellow).

Habenaria virescens Spreng.

Perularia flava Farwell.

Small Pale Green Orchis.

Occasional or frequent. Low meadows and open swamps. June — July.

Habenaria hyperborea (L.) R. Br. (northern).

Limnorchis hyperborea Rydb.

Limnorchis huronensis Rydb.

Tall Leafy Green Orchis.

Rich woods and wooded swamps. Rare in most districts: Bolton (Weatherby), New Britain (Bissell), Plainville (J. N. Bishop), Southington (Bissell, Andrews). Becoming occasional or local in Litchfield County. Late June — early Aug.

Habenaria dilatata (Pursh) Gray (expanded).

Limnorchis dilatata Rydb.

Tall White Bog Orchis.

Rare. Wet meadows or sphagnum bogs: Plainville (Andrews), Norfolk (J. H. Barbour, Miss M. C. Seymour). June — July.

Habenaria clavellata (Michx.) Spreng. (shaped like a little club).

Habenaria tridentata Hook.

Gymnadeniopsis clavellata Rydb.

Small Green Wood Orchis.

Occasional or frequent. Bogs and wet woods. July — Aug.

Habenaria Hookeri Torr.

Habenaria Hookeri Torr., var. *oblongifolia* Paine.

Lysias Hookeriana Rydb.

Rich woods. Rare near the coast, becoming occasional or local northward. June.

Habenaria orbiculata (Pursh) Torr. (disk-shaped).

Lysias orbiculata Rydb.

Large Round-leaved Orchis.

Rare. In woods: South Windsor (S. P. Elmore), Windsor (H. S. Clark), Norfolk (Miss M. C. Seymour), Salisbury (Mrs. C. S. Phelps & Weatherby). June.

Habenaria macrophylla Goldie (large-leaved).

Rare. Norfolk, in pine woods (J. H. Barbour). June — July.

Habenaria ciliaris (L.) R. Br. (fringed).

Blephariglottis ciliaris Rydb.

Yellow Fringed Orchis.

Meadows, swamps, dry fields, thickets and open woods along the coast. Occasional or frequent eastward, becoming rare or local westward. Not certainly known farther inland than Monroe (H. C. Beardslee). Mid-July — Aug.

Habenaria blephariglottis (Willd.) Torr. (eyelid-tongued: i. e., having a fringed lip).

Blephariglottis blephariglottis Rydb.

White Fringed Orchis.

Rare. Sphagnum bogs: Cromwell (Dr. E. J. Thompson), Bethany and Middlebury (Harger), Colebrook (J. W. Robins), Norfolk (Miss M. C. Seymour). Aug.

Habenaria lacera (Michx.) R. Br. (torn).*Blephariglottis lacera* Rydb.

Ragged or Ragged Fringed Orchis.

Occasional. Fields, meadows and open or wooded swamps.

July — mid-Aug.

Habenaria psycodes (L.) Sw. (butterfly-like).*Blephariglottis psycodes* Rydb.

Smaller Purple Fringed Orchis.

Occasional. Bogs, wet meadows and open swamps. Late

June — Aug.

Habenaria fimbriata (Ait.) R. Br. (fringed).*Habenaria grandiflora* Torr.*Blephariglottis grandiflora* Rydb.

Large Purple Fringed Orchis.

Rare or occasional. Swamps and wet woods. Mid-June —

July.

This species usually blooms several weeks earlier than

Habenaria psycodes.**POGONIA** Juss.**Pogonia ophioglossoides** (L.) Ker (like *Ophioglossum*, the Adder's Tongue).

Rose Pogonia. Snake or Adder's Mouth.

Occasional or frequent. Bogs and wet meadows. June —

July.

Rarely occurs with white flowers. The flowers are fragrant.

Pogonia trianthophora (Sw.) BSP. (bearing three flowers).*Pogonia pendula* Lindl.*Triphora trianthophora* Rydb.

Nodding Pogonia.

Rare or local. Rich woods, usually in leaf-mold: Norwich

(Miss M. P. Gilman, W. A. Setchell), Franklin (W. A. Setchell), Granby (I. Holcomb), Southington (Miss F. S. Walkley), Salisbury (Mrs. C. G. Beardslee & Mrs. C. S. Phelps).
Aug.

Pogonia verticillata (Willd.) Nutt. (whorled).*Isotria verticillata* Raf.

Whorled Pogonia.

Rare or occasional. Rich woods. Mid-May — early June.

Pogonia affinis Austin (allied).*Isotria affinis* Rydb.

Smaller Whorled Pogonia.

Rare. Rich woods: New Haven (E. S. Dana), Stratford (C. K. Averill, Eames). Mid-May — mid-June.

CALOPOGON R. Br.**Calopogon pulchellus** (Sw.) R. Br. (pretty).*Limodorum tuberosum* of American authors, not L.

Grass Pink. Calopogon.

Occasional or frequent. Bogs and low meadows. June — July.

The flowers are rarely pure white.

ARETHUSA L.**Arethusa bulbosa** L. (bulbous).

Arethusa.

Rare or local. Sphagnum bogs and wet meadows. Late May — June.

SPIRANTHES Richard. Ladies' Tresses.**Spiranthes Beckii** Lindl.*Spiranthes simplex* Gray.*Gyrostachys simplex* Kuntze.

Rare or local. Dry, sandy fields and sterile pastures. Aug. — Sept.

Spiranthes gracilis (Bigel.) Beck (slender).*Gyrostachys gracilis* Kuntze.

Frequent. Fields, meadows and open woods, in both moist and dry ground. Aug. — Sept.

Spiranthes vernalis Engelm. & Gray (vernal).*Spiranthes praecox* Gray's Manual ed. 6 in part.*Gyrostachys praecox* Kuntze.*Gyrostachys linearis* Rydb.

Fields and meadows, usually in dry soil. Occasional to frequent near the coast, becoming rare inland. Aug.—Sept.

Spiranthes lucida (H. H. Eaton) Ames (shining).

Spiranthes latifolia Torr.

Gyrostachys plantaginea Britton.

Rare or local. Moist river banks: Lyme (Mrs. E. E. Rogers), Cromwell (F. K. Hallock), Windsor (H. S. Clark), and along the Housatonic River from Oxford (Harger), northward to the state line. Late May—June.

Spiranthes cernua (L.) Richard (nodding).

Gyrostachys cernua Kuntze.

Frequent. Bogs, meadows and open swamps, or sometimes in drier places. Sept.—Oct.

The var. **ochroleuca** (Rydb.) Ames (buff-colored), *Gyrostachys ochroleuca* Rydb., occurs at Norfolk (Bissell), Salisbury (Mrs. C. S. Phelps).

Sometimes very fragrant.

Spiranthes Romanzoffiana Cham.

Gyrostachys stricta Rydb.

Rare. Sphagnum bog: Norfolk (J. H. Barbour). July.

EPIPACTIS Boehm. Rattlesnake Plantain.

Epipactis repens (L.) Crantz (creeping), var. **ophioides** (Fernald) A. A. Eaton (snake-like).

Peramium ophioides Rydb.

Goodyera repens Gray's Manual ed. 6 in part.

Peramium repens Britton & Brown's Ill. Flora in part.

Lesser Rattlesnake Plantain. Squirrel-ear.

Rare. Rocky woods under evergreens: Southington (J. Shepard), Norfolk (Miss M. C. Seymour). Aug.

Epipactis tessellata (Lodd.) A. A. Eaton (checkered).

Goodyera tessellata Lodd.

Peramium tessellatum Rydb.

Rattlesnake Plantain.

Rare or local. Rich woods in the northern part of the state, mostly under evergreens: Union and Granby (Bissell), Enfield (Andrews & Bissell), Manchester and South Windsor

(A. W. Driggs), East Hartford (Weatherby), Bristol (J. N. Bishop), Norfolk (Miss M. C. Seymour), Salisbury (Mrs. C. S. Phelps). Aug.—Sept.

Epipactis pubescens (Willd.) A. A. Eaton (downy).

Goodyera pubescens R. Br.

Peramium pubescens MacMill.

Net-leaf or Downy Rattlesnake Plantain. Scrofula-weed.

Frequent. Rich woods in either dry or moist ground. Aug.

All our species of this genus are considered medicinal, the whole plant being used.

CORALLORRHIZA Chatelain. Coral Root.

Corallorrhiza trifida Chatelain (three-cleft).

Corallorrhiza innata R. Br.

Corallorrhiza Corallorrhiza Karst.

Early Coral Root.

Rare. Cold swamps or wet pine woods: Waterford (Graves), Norwich (Mrs. E. E. Rogers), Manchester (A. W. Driggs), Cromwell (F. K. Hallock), Windsor (Weatherby), Plainville (J. N. Bishop), Oxford (Harger), Winchester (Andrews & Harger), Barkhamsted (C. S. Phelps), Cornwall (E. E. Brewster), Salisbury (Mrs. C. S. Phelps). May—June.

All the species of this genus are parasitic upon other plants and are destitute of green parts.

Corallorrhiza maculata Raf. (spotted).

Corallorrhiza multiflora Nutt.

Corallorrhiza multiflora Nutt., var. *flavida* Peck.

Large Coral Root.

Occasional to frequent. Rich woods, usually in leaf-mold. July—Sept. The form with yellow flowers occurs at Plainville (H. S. Clark), and Salisbury (Mrs. C. S. Phelps).

Corallorrhiza odontorrhiza Nutt. (having a toothed root).

Coral Root. Crawley Root. Dragon's Claw. Chicken-toes.

Rich woods either moist or dry. Occasional in southern Connecticut, becoming rare in northern districts. Mid-Aug.—Oct.

The rootstock is medicinal.

MICROSTYLIS Eaton. Adder's Mouth.**Microstylis monophyllos** (L.) Lindl. (single-leaved).*Achroanthes monophylla* Greene.

White Adder's Mouth.

Rare. Wet mossy woods: Salisbury (Mrs. C. S. Phelps, H. S. Clark & Bissell). June.

Microstylis unifolia (Michx.) BSP. (single-leaved).*Microstylis ophioglossoides* Eaton.*Achroanthes unifolia* Raf.

Green Adder's Mouth.

Rare. Rich woods either moist or dry: Norwich (W. A. Setchell, Mrs. E. E. Rogers), Franklin (Graves), East Lyme (Miss A. M. Ryon), Union and Salisbury (Bissell), Bolton (A. W. Driggs & Weatherby), Enfield and Meriden (Andrews & Bissell), Berlin (T. S. Brandeggee), Granby (I. Holcomb), New Haven (O. Harger), Oxford (Harger), Easton (Eames). July — Aug.

LIPARIS Richard. Twayblade.**Liparis liliifolia** (L.) Richard (lily-leaved).*Leptorchis liliifolia* Kuntze.

Large Twayblade.

Rare or occasional. Rich and moist or sometimes dry and rocky woods. June.

Liparis Loeselii (L.) Richard.*Leptorchis Loeselii* MacM.

Fen Orchis.

Rare or occasional. Bogs, moist woods and wet shaded banks. June — July.

APLECTRUM (Nutt.) Torr. Putty-root. Adam-and-Eve.**Aplectrum hyemale** (Muhl.) Torr. (lasting over the winter).*Aplectrum spicatum* BSP.

Putty-root. Adam-and-Eve.

Rare. Rich woods: Norwich (J. Trumbull), West Hartford (H. S. Clark, Miss A. Lorenz), Farmington (C. H. Pember), Granby (I. Holcomb), New Haven and Hamden

(Harger), Danbury (H. C. Ryder), Salisbury (Mrs. C. S. Phelps). June.

The root is medicinal.

DICOTYLEDONEAE.

PIPERACEAE. PEPPER FAMILY.

SAURURUS L. Lizard's Tail.

Saururus cernuus L. (nodding).

Lizard's Tail.

Shallow water of rivers, ponds and marshes. Preston, in the Shetucket River (W. A. Setchell, Graves), Franklin and Sprague (Graves), along the Housatonic River from the Sound northward as far as Oxford and Newtown (Harger, Eames), and occasional in the southwestern part of the state (Eames). July — Aug.

SALICACEAE. WILLOW FAMILY.

SALIX L. Willow. Osier.

Shrubs and trees with light soft wood used to some extent for cabinet work and for fuel. Willow charcoal is considered one of the best for medicinal and pharmaceutical use and for making crayons and gunpowder.

Willows are propagated with the greatest ease from cuttings, and are extensively planted as ornamental and shade trees. They often serve also to drain wet grounds, which they do by transpiring great quantities of water.

In some parts of the country certain species are extensively grown for osiers to be used in basket making and wickerwork. The bark of most species of willow contains more or less of a very bitter principle called salicin, used in medicine.

Salix nigra Marsh. (black).

Black Willow.

Rare or occasional. Low grounds and borders of ponds and streams. May.

The var. **FALCATA** (Pursh) Torr. (scythe-shaped) is occasional to frequent in similar situations, being more plentiful than the typical form.

This species spreads rapidly along rivers by the rooting of broken twigs and branches. The bark and aments are medicinal.

***Salix pentandra* L. (having five stamens).**

Bay-leaved or Laurel-leaved Willow.

Rare. Escaped from cultivation to roadsides: Lyme, near Hadlyme Ferry (Graves), Norfolk (Bissell). May. Adventive from Europe.

***Salix lucida* Muhl. (shining).**

Shining Willow. Glossy Willow.

Occasional. Swamps and borders of ponds and streams. May.

***Salix serissima* (Bailey) Fernald (very late; referring to the time of flowering and fruiting).**

Autumn Willow.

Open swamps and wet pastures. Rare or local and apparently confined to the northwestern part of the state: Norfolk (Bissell), Salisbury (M. L. Fernald, Bissell). May — early June; fruit Aug.—Sept.

***Salix fragilis* L. (brittle).**

Crack Willow. Brittle Willow.

Rare or local. Waste grounds, moist roadsides and banks of streams as an escape from cultivation: East Windsor and West Hartford (Bissell), New Haven (W. H. Patton, Harger), Bridgeport (Eames). May. Naturalized from Europe.

Introduced into this country about 1850, when a company of promoters induced many farmers to plant this willow for hedges. Many of these old hedges now occur throughout the state.

***Salix alba* L. (white).**

White Willow.

The typical form of this species has not been reported from Connecticut.

The var. *VITELLINA* (L.) Koch (egg-yellow) is occasional in moist ground, especially near ponds and streams. May. Naturalized from Europe.

A hybrid of this variety with *Salix fragilis* occurs rarely in the valley of the Connecticut River (Bissell).

Often planted for ornament.

***Salix babylonica* L.**

Weeping Willow. Ring Willow.

Rare. River banks and roadsides, as an escape from cultivation: Lyme (Graves & Bissell), Southington (Andrews & Bissell), New Haven (Bissell), Stratford, Bridgeport and Fairfield (Eames). May. Adventive from Europe.

Formerly much planted for ornament, especially in cemeteries.

***Salix longifolia* Muhl. (long-leaved).**

Salix fluviatilis of authors, not Nutt.

Sand Bar or River Bank Willow.

Local. Banks of the Connecticut River from Hartford southward: Hartford and Glastonbury (Bissell), Middletown (Dr. Barratt, Harger, Bissell), Lyme (Graves, Bissell & Andrews), Old Saybrook (Harger). May.

***Salix cordata* Muhl. (heart-shaped).**

Salix cordata Muhl., var. *angustata* Anders.

Heart-leaved Willow.

Frequent or common. Wet ground. Late April — May; fruit Aug.

The var. MYRICOIDES (Muhl.) Carey (like *Myrica*, the Sweet Gale), *Salix acutidens* Rydb., occurs at Stratford (Eames).

***Salix pedicellaris* Pursh (borne on a stalk).**

Salix myrtilloides of Gray's Manual ed. 6, not L.

Bog Willow.

Rare. In bogs: Stafford (Graves), East Granby (Weatherby), New Haven (D. C. Eaton, Harger), Norfolk (Bissell), Cornwall (E. E. Brewster). May.

***Salix discolor* Muhl. (parti-colored; referring to the leaves).**

Glaucous Willow. Pussy Willow.

Common. Swamps and low places, or sometimes in rather dry ground. April.

The var. *ERIOCEPHALA* (Michx.) Anders. (woolly-headed), *Salix eriocephala* Michx., is occasional in the southwestern part of the state (Eames).

The var. *PRINOIDES* (Pursh) Anders. (like the Black Alder), *Salix prinoides* Pursh, is rare: Stratford, Trumbull and Bridgeport (Eames).

Hybrids of this species with *Salix rostrata* occur at Stafford (Graves & Bissell). Hybrids with *Salix humilis* are apparently occasional throughout.

***Salix humilis* Marsh. (low).**

Prairie Willow.

Occasional to frequent. Sandy thickets either dry or moist. April — early May; fruit May.

A hybrid of this with *Salix sericea* occurs at Stafford (Graves & Bissell).

***Salix tristis* Ait. (dull-colored).**

Dwarf Gray Willow.

Sand plains and dry open ground. Occasional to frequent in the eastern and north central parts of the state; rare elsewhere, as at New Haven (D. C. Eaton), Bridgeport (Eames), Oxford and Southbury (Harger). Mid-April — mid-May; fruit May.

***Salix sericea* Marsh. (silky).**

Silky Willow.

Frequent. Near streams and ponds and in swamps. Mid-April — mid-May; fruit May — June.

***Salix rostrata* Richards. (beaked).**

Salix Bebbiana Sarg.

Beaked Willow.

Frequent. Woods and thickets, in either moist or dry ground. Late April — May; fruit May — June.

***Salix candida* Flügge (shining white).**

Hoary Willow. Sage Willow.

Local. Swamps in the northwestern part of the state: Norfolk and Cornwall (Bissell), Salisbury (M. L. Fernald). April; fruit May.

The var. *DENUDATA* Anders. (bared) occurs at Salisbury, near Twin Lakes (J. R. Churchill & Bissell).

***Salix purpurea* L. (purple).**

Purple, Bitter, Rose or Whip-cord Willow.

Rare or local. Dry or wet open ground: Voluntown (Harger & Graves), New London (Graves), Hartford, many plants over a wide area (H. S. Clark & Bissell), Southington and Berlin (Andrews & Bissell), New Haven (Eaton Herb.), Seymour (Harger), Stafford and Winchester (Bissell), Salisbury (Mrs. C. S. Phelps & Bissell), Waterbury (A. E. Blewitt). April — May. Adventive from Europe.

Grown for basket rods.

***Salix incana* Schrank (hoary).**

Gray or Lavender Willow.

Rare. Escaped from cultivation to a river bank at Hartford, a few plants only (H. S. Clark). April — May. Fugitive from Europe.

POPULUS L. Poplar. Aspen.

Rapidly growing trees with soft, light wood, of little value for timber, but an important source of wood-pulp and useful for fuel in parts of the country where other wood is scarce. The poplar of the lumberman is *Liriodendron Tulipifera*, the Tulip Tree.

***Populus alba* L. (white).**

White or Silver-leaved Poplar. Abele. White-bark.

Occasional. Escaped from cultivation to roadsides and waste places. April — May. Naturalized from Europe.

Often planted as an ornamental or shade tree, and sometimes to stop sand-blows. The bark is medicinal.

***Populus tremuloides* Michx. (like *Populus tremula*, the European Aspen).**

American or Quaking Aspen. Poplar. Popple. Quiver-leaf. Trembling or White Poplar. Aspen.

Frequent. Woods, thickets and roadsides, more often in dry ground. April — May.

One of the first trees to take possession of clearings. The bark is medicinal.

Populus grandidentata Michx. (large-toothed).

Large-toothed Aspen. Poplar. Popple.

Frequent. Moist or dry woods and clearings, more often in rocky ground. April — May.

Populus heterophylla L. (various-leaved).

Swamp or Downy Poplar.

Rare or local. Wooded swamps and borders of ponds: Salem and Montville (W. A. Setchell, H. C. Beardslee, Graves), Middletown (Graves, Bissell, Andrews), Branford and Southington (Bissell & Andrews), Guilford (G. H. Bartlett), East Haven and Southbury (Harger). May.

Populus balsamifera L. (balsam-bearing).

Balsam Poplar. Tacamahac.

Local. River banks, wet woods and roadsides, usually as an escape from cultivation: Southington (H. Whitney), Milford (Eames & C. C. Godfrey), Wilton (Eames & G. P. Ells), Sherman, New Milford and Kent (E. H. Austin, C. K. Averill). Apparently native at Norfolk (H. S. Clark & Bissell). April — May.

Populus candicans Ait. (white and shining).

Populus balsamifera L., var. *candicans* Gray.

Balm of Gilead.

Rare or occasional. Roadside thickets and fence-rows as an escape from cultivation. April — May. In Connecticut naturalized, probably from Asia.

Occasionally planted as a shade tree. The leaf-buds and bark are medicinal, the first named having been much used in former times as a household remedy.

Populus deltoides Marsh. (triangular; referring to the shape of the leaves).

Populus monilifera Ait.

Cottonwood. Necklace Poplar.

Borders of streams and in wet ground. Frequent in the valleys of the Connecticut, Farmington and Housatonic Rivers; rare or occasional elsewhere. April — May.

A strong, rapidly growing tree, often planted as a shade tree, and on the western prairies for wind-breaks.

Populus nigra L. (black).

Black Poplar.

Rare. Roadsides and river banks as an escape from cultivation: Preston and East Lyme (Graves). April — May. Adventive from Europe.

Has been more or less planted in this country as an ornamental tree for more than a hundred years. It grows more slowly than the Cottonwood.

The var. *ITALICA* Du Roi, *Populus dilatata* L., Lombardy Poplar, was formerly much planted for ornament and has rarely escaped to roadsides and river banks: Lyme (Graves & Bissell), East Windsor (Bissell), Southington (Andrews & Bissell), Berlin and Cheshire (Andrews), Newtown (Harger), Sherman (Eames).

The variety is a quick-growing tree of striking habit, but in this climate it is short-lived.

MYRICACEAE. SWEET GALE FAMILY.**MYRICA** L.**Myrica Gale** L. (classical name).

Sweet Gale. Dutch or Bog Myrtle. Golden Osier.

Swamps and borders of ponds and streams. Occasional or local in the northern part of the state, becoming rare southward; not reported from the vicinity of the coast. April.

The leaves and buds are aromatic and medicinal.

Myrica carolinensis Mill.

Myrica cerifera of Gray's Manual ed. 6, in great part.

Bayberry. Candlewood. Waxberry. Wax Myrtle.

Frequent or common. Dry fields and pastures, sand plains and sea shores. Late May — June; fruit Sept., persisting through the winter.

The berries yield a wax or tallow, somewhat used for making candles which burn with a faintly aromatic odor. One bushel of berries is said to yield four lbs. of wax. The leaves and the bark of the roots are somewhat medicinal.

Myrica asplenifolia L. (having leaves like *Asplenium*, the Spleenwort).

Comptonia peregrina Coulter.

Sweet Fern.

Common. Dry or sterile ground. May; fruit July — Aug.

The leaves and the tops have some reputation for medicinal properties.

JUGLANDACEAE. WALNUT FAMILY.

JUGLANS L. Walnut.

Juglans cinerea L. (ashy).

Butternut. White Walnut. Oil Nut.

Frequent. Roadsides and rocky woods, generally in dry ground. May; fruit Oct.

The nuts are edible and are much gathered. The husks were formerly used in dyeing cloth yellow. The bark is sometimes used in tanning, and sugar can be obtained from the sap. The wood is employed in the interior finish of houses and for furniture. The bark of the root is medicinal and is officinal.

Juglans nigra L. (black).

Black Walnut.

Rare. Roadsides and rocky hillsides, in most localities derived from planted trees: Norwich (Mrs. E. E. Rogers), East Hartford (H. S. Clark), Newington (Bissell), Southington (Andrews & Bissell), Seymour and Southbury (Harger), Trumbull and Easton (Eames). Probably native at North Canaan (Bissell). May; fruit Oct. For the most part adventive from the West.

The nuts are edible. The wood is valued for cabinet work, for the interior finish of houses, for gunstocks and in ship-building.

CARYA Nutt. Hickory.

A very important group of trees on account of the value of their timber and nuts. Hickory wood has great strength combined with elasticity and is extensively used in the manufacture of carriages, wagons and farming implements; also for axe, pick and other tool handles. When exposed to the weather, however, it should be painted, as otherwise it is liable to quick decay.

Carya ovata (Mill.) K. Koch (egg-shaped).

Carya alba Nutt.

Hicoria ovata Britton.

Shag-bark or Shell-bark Hickory. Walnut.

Frequent or common. Woods and fields, in either moist or dry ground. Late May — early June; fruit Oct.

The most valuable of our native nut trees both for its timber and its fruit. The nut is the common Hickory Nut of the markets.

Carya alba (L.) K. Koch (white).

Carya tomentosa Nutt.

Hicoria alba Britton.

Mocker Nut. White-heart Hickory.

Occasional or frequent. Rocky woods and pastures, mostly in dry ground. Early June; fruit Oct.

The timber is nearly equal to that of the Shag-bark Hickory, the nuts not as good.

Carya microcarpa Nutt. (small-fruited).

Hicoria microcarpa Britton.

Small-fruited Hickory. Little Pignut Hickory.

Rocky woods and hillsides in either dry or moist ground. Occasional or frequent along or near the coast, apparently not extending far inland. Late May — early June; fruit Oct.

The nuts are usually bitter. The open or half-open husks often hang on the tree through the following summer.

Carya glabra (Mill.) Spach (smooth).

Carya porcina Nutt.

Hicoria glabra Britton.

Pignut or Broom Hickory. Pignut.

Occasional or frequent. Rocky woods and hillside pastures. Late May — early June; fruit Oct.

The nuts, usually bitter though sometimes sweet, are of little value. The timber is equal in value to that of the Shag-bark Hickory.

Carya cordiformis (Wang.) K. Koch (heart-shaped).

Carya amara Nutt.

Hicoria minima Britton.

Bitter Nut or Swamp Hickory.

Occasional. Wet woods and banks of streams. Late May — June; fruit Oct.

Nuts very bitter, inedible.

BETULACEAE. BIRCH FAMILY.**CORYLUS L. Hazelnut. Filbert.*****Corylus americana* Walt.**

Hazelnut or Wild Hazelnut. Hazel.

Frequent or common. Woods, thickets, pastures and roadsides, mostly in dry ground. March — April; fruit Sept.

The nuts of this and the following species are well flavored and edible and are gathered to some extent.

***Corylus rostrata* Ait. (beaked).**

Beaked Hazelnut. Filbert.

Woods, thickets and hillside pastures in dry ground. Rare on or near the coast, occasional elsewhere. April; fruit Sept.

OSTRYA Scop. Hop Hornbeam. Ironwood.***Ostrya virginiana* (Mill.) K. Koch.**

Ostrya virginica Willd.

American Hop Hornbeam. Leverwood. Ironwood. Deerwood.

Frequent. Rocky woods and thickets. May; fruit July — Aug.

The wood is hard and exceedingly tough, used for handles of tools, mallets and other small articles. The bark is medicinal.

CARPINUS L. Hornbeam. Ironwood.***Carpinus caroliniana* Walt.**

American Hornbeam. Blue or Water Beech.

Frequent or common. Woods, thickets and banks of streams. May; fruit July — Aug.

The wood is close-grained and hard, of value for tool handles, etc.

BETULA L. Birch.

The birches, while not as a rule good timber trees, are yet of great use to man. The wood is generally light in color and weight, but tough and well suited for the making of many small articles. It is also good fuel and makes excellent charcoal.

Betula lenta L. (tough).

Cherry, Sweet or Black Birch.

Frequent or common. Woods, in either dry rocky or rich moist ground. May; fruit Oct.

The wood is extensively used in cabinet work. It also yields an oil which is practically identical with the oil of wintergreen, is of much medicinal value and is officinal. A beer is made from the fermented sap.

Betula lutea Michx. f. (yellow).

Yellow or Gray Birch.

Occasional or frequent. Rich or rocky woods and in swamps. May; fruit Oct.

A handsome tree furnishing timber of considerable value, used in cabinet work, for boxes, etc.

Betula populifolia Marsh. (poplar-leaved).

White, Gray or Old Field Birch.

Common. Woods, clearings, pastures and roadsides, mostly in dry sterile ground. May; fruit Sept.—Oct.

Usually the first tree to take possession of abandoned fields. The wood is largely used in making spools.

Betula alba L. (white), var. **papyrifera** (Marsh.) Spach (paper-bearing).

Betula papyrifera Marsh.

Paper, Canoe or White Birch.

Rich woods and rocky hillsides. Rare near the coast: Lyme (Graves), Huntington (Eames). Becoming occasional northward and frequent in Litchfield County. May; fruit Sept.

In northern countries the wood and bark of this species are put to the greatest variety of uses. The wood is made into furniture, dishes, spoons, bowls and other wooden ware, ox yokes, shoes, casks and hoops; the brushwood makes wicker fences, thatch and brooms; the bark is used for tanning; the North American Indians manufactured their canoes of it and employed it in many other ways; the sap of this and other species is sometimes made into a kind of wine; the leaves afford a yellow dye.

Betula alba L., var. **cordifolia** (Regel) Fernald (having heart-shaped leaves).

Paper, Canoe or White Birch.

Rare. Rocky hillsides: Union, at Bald Hill (Bissell, Graves), Goshen (Bissell). May; fruit Sept.

Betula pumila L. (dwarf).

Low or Swamp Birch.

Swamps and wet ground. Local and apparently confined to the northwestern part of the state: Cornwall (E. E. Brewster), Salisbury (Bissell). May; fruit Sept.

ALNUS Hill. Alder.

Alnus incana (L.) Moench (hoary).

Alder. Speckled or Hoary Alder.

Swamps and borders of streams. Local or occasional except in the southeastern part of the state where it is rare. April; fruit Sept.

The wood of this and the following species is a source of gunpowder charcoal, and is said to be valuable also because of its durability in water. The bark has medicinal properties.

Alnus rugosa (Du Roi) Spreng. (wrinkled).

Alnus serrulata Willd.

Alder. Smooth or Tag Alder.

Frequent or common. Swamps and borders of ponds and streams. March — April; fruit Sept.— Oct.

Intermediate forms occur that are apparently hybrids between this and the preceding species.

FAGACEAE. BEECH FAMILY.

FAGUS L. Beech.

Fagus grandifolia Ehrh. (large-leaved).

Fagus ferruginea Ait.

Fagus americana Sweet.

Beech. American Beech.

Occasional or frequent. Woods and banks in either dry or moist ground. May; fruit Sept.— Oct.

Rarely matures perfect fruit here. The timber, hard and close-grained but rather brittle, is used sparingly for tool

handles. The wood is not durable in contact with the soil, but is remarkably lasting when immersed in water, hence is largely used in making dams, sluices, etc. The purest creosote for medicinal use is obtained from beech wood. A beautiful tree at all seasons of the year.

CASTANEA Hill. Chestnut.

Castanea dentata (Marsh.) Borkh. (toothed).

Castanea sativa Mill., var. *americana* Sarg.

Chestnut.

Common. Rich woods or often in drier ground. Late June — mid-July; fruit late Sept. — Oct.

The nuts are sweet and edible and are extensively gathered for market. The timber is of much value, very durable in contact with the soil, and used especially for poles, piling and railroad ties. One of our most abundant and valuable forest trees. The burs furnish a lampblack used in painting, and contain a dark brown dye. The bark and leaves are somewhat medicinal.

QUERCUS L. Oak.

A large genus of very valuable trees, whose timber and bark are among the most important products of the forest. Oak wood possesses in a high degree strength, solidity, durability and resistance to water, and is largely used in ship building and mill and bridge construction. In the making of furniture also and the interior finish of houses it is very extensively employed. The bark of many species is much used in tanning. Oak trees are famous for their picturesque beauty and dignity, and it is a pity that so few large old specimens are preserved. They are among the most valued trees on estates and country places; in fact any farm is enhanced in value by the possession of a few old oaks.

Quercus alba L. (white).

White Oak.

Common. Moist or dry ground and in various soils. Mid-May — June; fruit Sept. — Oct.

The most valuable of the oaks both for timber and for

tanning. The bark is rich in tannin, is of medicinal value and is official. The acorns are sometimes roasted and used as a substitute for coffee.

Quercus stellata Wang. (star-shaped).

Quercus minor Sarg.

Post Oak. Iron Oak.

Local. Usually in rocky ground on and near the coast: East Lyme and Old Lyme (Graves), Branford (Andrews), New Haven (C. K. Averill, Eames, Harger), Orange and Milford (C. K. Averill, Andrews, Bissell), and westward (Eames). Extending inland as far as Hamden, on Mt. Carmel (A. E. Blewitt), and Huntington, at 350 ft. elevation (Eames). May; fruit Oct.

The wood is very hard, heavy and strong. In Connecticut only a small tree.

Quercus macrocarpa Michx. (large-fruited).

Bur Oak. Over-cup or Mossy-cup Oak.

Rich soil in bottom lands or swampy places. Rare or local and confined to the northwestern part of the state: Canaan (J. H. Putnam & Bissell), Salisbury (Mrs. C. S. Phelps). May; fruit Sept.—Oct.

The wood is heavy and hard, similar to and often sold as that of the White Oak.

Quercus bicolor Willd. (two-colored).

Quercus platanoides Sudworth.

Swamp White Oak.

Frequent. Swamps and wet woods. May; fruit Sept.—Oct.

The wood is heavy and strong, furnishing a good quality of timber.

Quercus Muhlenbergii Engelm.

Quercus acuminata Houba.

Yellow Oak. Chestnut Oak.

Rare. Calcareous ridges in the northwestern part of the state: Canaan (C. K. Averill), Salisbury (Mrs. C. S. Phelps). Also along the Housatonic River in Kent (E. H. Austin & Eames), New Milford (C. K. Averill & E. H. Austin), and

bordering tide water in Milford (Eames). May; fruit Sept.—Oct.

The wood is very heavy, hard and durable.

Quercus prinoides Willd. (like *Quercus Prinus*, the Chestnut Oak).

Scrub Chestnut Oak. Chinquapin Oak.

Occasional or frequent. Dry woods, thickets and hillside pastures, and sometimes in open sandy ground. May; fruit Sept.—Oct.

Quercus Prinus L. (classical name for an evergreen oak).

Chestnut or Rock Chestnut Oak.

Rocky ridges and hillsides. Occasional near the coast; frequent or common elsewhere. May; fruit Sept.—Oct.

The wood is durable in contact with the soil, ranking among the oaks next to that of the White Oak for railroad ties. The bark is rich in tannin and is much used in tanning leather.

Quercus rubra L. (red).

Red or Champion Oak.

Frequent. Woods in all soils and various situations. May; fruit Sept.—Oct.

The timber of this species as well as that of *Quercus coccinea* and *Quercus velutina* is relatively poor, but is more used than formerly on account of the scarcity of better. The bark of all three species is used in tanning and also contains a dye.

Quercus palustris Muench. (of swamps).

Pin Oak. Swamp Spanish Oak.

Swamps and borders of ponds and streams. Common in the Connecticut River valley and near the coast in southwestern Connecticut; occasional or local elsewhere. May; fruit Sept.—Oct.

The timber is relatively of a poor quality. Grows more rapidly than most other species of oak and is often planted as a shade or ornamental tree.

Quercus coccinea Muench. (scarlet).

Scarlet Oak.

Frequent. Moist or dry woodlands. May; fruit Sept.—Oct.

The foliage takes a very brilliant color in autumn.

Quercus velutina Lam. (velvety).

Quercus coccinea Muench., var. *tinctoria* A. DC.

Quercitron, Yellow-barked or Black Oak.

Occasional or frequent. Dry or gravelly uplands. May; fruit Sept.—Oct.

Quercus ilicifolia Wang. (holly-leaved).

Quercus nana Sarg.

Bear or Black Scrub Oak.

Dry sandy or rocky sterile ground. Rare in the north-western part of the state; local, frequent or common elsewhere. May; fruit Sept.—Oct.

URTICACEAE. NETTLE FAMILY.

ULMUS L. Elm.**Ulmus fulva** Michx. (tawny).

Slippery, Red, Rock, Sweet, Moose, Indian or Tawny Elm.

Rare to frequent. Dry or moist rocky woods and near streams. April, rarely earlier.

The wood is hard, strong, durable in contact with the soil; of value for wheel-stock, fence posts, etc., and sometimes preferred for ox-yokes. The inner bark is extensively used in medicine.

Ulmus campestris L. (of fields).

English or European Elm.

Rare. Escaped from cultivation to roadsides in Hamden, at Mt. Carmel (A. H. Graves), Oxford (Harger), and Salisbury (Mrs. C. S. Phelps), in horticultural forms. April—May. Adventive from Europe.

Sometimes planted as an ornamental tree.

Ulmus americana L.

American, White, Common, Water, Swamp, Shade, Weeping or Feathered Elm.

Common. Woods, fields, roadsides and along streams. April, rarely earlier.

The wood is hard, strong and tough; valued for wheel-stock, boats and ship building. One of our most beautiful trees and extensively planted for shade or ornament.

Ulmus alata Michx. (winged).

Wahoo, Winged or Witch Elm.

Rare. Spread from cultivation to roadsides and fence-rows: Old Lyme (H. S. Clark), Plainville (J. N. Bishop).

May. Adventive from the South.

Often planted as a shade tree in the South.

CELTIS L. Hackberry. Nettle Tree.**Celtis occidentalis** L. (western).

Hackberry. Sugarberry. American Nettle Tree. False Elm. Hoop Ash.

Occasional to frequent. Dry or poor soils, especially in river valleys and along the coast. May; fruit Sept., and often persisting through the winter.

The var. *PUMILA* Muhl. (dwarf) is rare or occasional in the Housatonic River Valley in Kent, New Milford and Newtown (Eames), and Oxford (Harger, Eames).

A small tree of natural beauty, but the leaves and small branches are usually much galled by insects. The wood is soft, weak, elastic, and easily splits, and is of little value. The bark is medicinal. The fruit is edible.

CANNABIS L. Hemp.**Cannabis sativa** L. (sown).

Common Hemp.

Rare or occasional. Waste places throughout. July — Sept. Adventive or naturalized from Asia.

Grown in India, it is officinal as *Cannabis indica*, has very marked medicinal properties, and is the source of the intoxicant "hashish." Its fibre is one of the important textile products, valuable for coarse cloth, cordage, etc., and its seeds yield an oil used in paints, soap and culinary preparations.

HUMULUS L. Hop.**Humulus Lupulus** L. (from *Lupus*, its classical name).

Common Hop.

Occasional. River banks, woods and waste places, often as an escape from cultivation. July — Aug.; fruit Sept.

The strobiles are used in the manufacture of beer, ale and yeast; also in medicine and are officinal. A good arbor-plant.

Humulus japonicus Sieb. & Zucc.

Japanese Hop.

Rare. Escaped from cultivation into waste ground: New London (Graves), Hartford (H. S. Clark & Bissell), Bridgeport and Fairfield (Eames). Aug.—Sept. Adventive from Japan.

Recently introduced into cultivation and becoming popular as an arbor-plant.

MACLURA Nutt. Osage Orange. Bois d'Arc.

Maclura pomifera (Raf.) Schneider (pome-bearing).

Maclura aurantiaca Nutt.

Toxylon pomiferum Sarg.

Osage or Mock Orange or Apple. Bow-wood.

Rare. Escaped from cultivation into roadsides and neglected places: Waterford (Graves), East Haven (D. C. Eaton), Waterbury (A. E. Blewitt), Kent (C. K. Averill). June. Native of the Southwest.

The wood is durable in contact with the soil and is valued for fence posts. Formerly planted for hedges.

BROUSSONETIA L'Hér.

Broussonetia papyrifera (L.) Vent. (paper-bearing).

Paper Mulberry.

Rare. Norwalk, spontaneous in waste land (Miss A. E. Carpenter). May—June. Native of Asia.

MORUS L. Mulberry.

Morus rubra L. (red).

Red Mulberry.

Rare or occasional. Dry rocky woods, fields and fence-rows. May—June; fruit July.

The wood is rather soft, coarse-grained and tough, and is very durable in contact with the soil. The fresh fruit is mawkish to some palates, agreeable to others. Medicinal.

Morus alba L. (white).

White or Silkworm Mulberry.

Occasional. Escaped from cultivation to roadsides, fence-

rows and waste places. May—June; fruit late June—July. Naturalized from the Old World.

Early in the last century extensively planted to furnish food for silkworms, and many large old trees remain about farmhouses. Birds and poultry are so fond of the fruit that one or more of these trees, when properly situated, would tend to prevent the destruction of cultivated berries maturing during the same period.

URTICA L. Nettle.

***Urtica gracilis* Ait.** (slender).

Slender or Tall Wild Nettle.

Frequent or common. Roadsides, fence-rows and waste places. June—Aug.

A troublesome weed, best exterminated by digging.

***Urtica Lyallii* Wats.**

Waste places, roadsides and low ground along streams. Stafford (Graves & Bissell), Southington (Andrews), Newtown (Eames); and probably occurring throughout the state, as the species has been confused with *Urtica gracilis*. July—Aug.

***Urtica dioica* L.** (dioecious).

Stinging or Great Nettle.

Rare. Waste places in rich soil: Guilford (G. H. Bartlett), Seymour (Harger), North Canaan (M. B. Tobey). June—Aug. Adventive from Europe.

The plant is medicinal.

***Urtica urens* L.** (burning).

Small or Dwarf Nettle.

Rare. Waste places, cultivated ground and about farmyards: Groton and Lebanon (Graves), New London (D. C. Eaton), Southington (Andrews), Woodbridge (A. W. Evans). June—Aug. Adventive from Europe.

The plant is medicinal.

LAPORTEA Gaud. Wood Nettle.

***Laportea canadensis* (L.) Gaud.**

Urticastrum divaricatum Kuntze.

Wood or Canada Nettle. Albany Hemp.

Occasional or frequent. Moist rich woods and partial shade. July — Aug.

PILEA Lindl. Richweed. Clearweed.

Pilea pumila (L.) Gray (dwarf).

Adicea pumila Raf.

Clearweed. Coolweed. Stingless Nettle.

Frequent. Moist rich woods and shaded places. Aug. — Sept.

An objectionable weed in lawns and about dwellings. The bruised plant is sometimes applied for the relief of inflammation and poisoning by species of *Rhus*.

BOEHMERIA Jacq. False Nettle.

Boehmeria cylindrica (L.) Sw. (cylindrical).

False Nettle.

Frequent. Moist rich woods and along streams. July — Aug.

Boehmeria cylindrica (L.) Sw., var. *scabra* Porter (rough).

Rare. Rich woods: Southington (Bissell), Bridgeport (I. Holden & Baker), Fairfield (Eames). July — Aug.

PARIETARIA L. Pellitory.

Parietaria pennsylvanica Muhl.

Pellitory.

Rare or local. Rich damp shaded soil about rocks and ledges. Seldom seen, though known to occur at wide intervals throughout the state. May — Sept.

SANTALACEAE. SANDALWOOD FAMILY.

COMANDRA Nutt. Bastard Toad-flax.

Comandra umbellata (L.) Nutt. (umbellate).

Bastard Toad-flax.

Frequent. Dry woods, thickets and more open places. May — June.

LORANTHACEAE. MISTLETOE FAMILY.

ARCEUTHOBIUM Bieb.

Arceuthobium pusillum Peck (very small).

Razoumofskya pusilla Kuntze.

Dwarf Mistletoe.

Rare or local. Parasitic on Black Spruce: Norfolk, at 1400 ft. elevation, and Salisbury, about Bingham Pond at an altitude of 1800 ft. (H. S. Clark & Bissell), Kent, about Spectacle Ponds, where at an altitude of 1,200 ft. it also occurs on Tamaracks (Eames & E. H. Austin). April—May; fruit Sept.

ARISTOLOCHIACEAE. BIRTHWORT FAMILY.

ASARUM L. Asarabacca. Wild Ginger.

Asarum canadense L.

Wild Ginger or Ginger-root. Sweet, False or Canada Colts-foot. Heart Snakeroot.

Rich rocky woods. Rare in the southeastern part of the state and near the coast, occasional to locally common elsewhere. Mid-April—May.

The var. **REFLEXUM** (Bicknell) Robinson (bent backward), *Asarum reflexum* Bicknell, and the var. **ACUMINATUM** Ashe (taper-pointed), *Asarum acuminatum* Bicknell, occur with the species or alone, the former in its most distinct condition in the southwestern part of the state.

Readily cultivated, and makes a pleasing ground covering in rich shaded places. The rhizome is used medicinally and an oil from it is used in perfumery.

ARISTOLOCHIA L. Birthwort.

Aristolochia Serpentina L. (pertaining to a serpent).

Snakeroot. Virginia or Fine Snakeroot.

Dry rocky woods. Rare or local over most of its range: East Lyme (Miss A. M. Ryon), East Haddam (Dr. E. J. Thompson, Graves), Haddam (D. C. Eaton), Meriden (W. A. Russell), Southington (C. D. Bishop), Naugatuck (J. Nichols), Oxford and Southbury (Harger), Newtown (Eames). Occasional toward the coast westward. Mid-June—July.

The aromatic roots are medicinal and are officinal.

POLYGONACEAE. BUCKWHEAT FAMILY.

RUMEX L. Dock. Sorrel.

Rumex Patientia L. (patience).

Patience or Spring Dock. Garden or Herb Patience.

Rare. Alluvial or waste ground: Lyme (Graves), Seymour (Harger). May—June. Adventive from Europe. Sometimes cultivated for spring greens.

Rumex Britannica L.

Great Water Dock. Horse Dock.

Occasional. Swamps, fresh and brackish marshes and shallow water along streams. July—Aug.

Rumex crispus L. (curled).

Curled, Curly, Yellow or Narrow Dock.

Common. Waste places, fields and meadows, especially in moist situations. June—July. Naturalized from Europe.

A troublesome weed in grasslands and grain fields. The leaves are often used as a pot-herb. The root is of value in medicine, and is in popular use as a blood purifier.

Rumex elongatus Guss. (lengthened).

Fields and waste ground. Southington (Andrews), and probably elsewhere, as the species has been confused with *Rumex crispus* and is presumed to occur occasionally with it. June—July. Adventive from Europe.

Rumex mexicanus Meisn.

Rumex salicifolius of Gray's Manual ed. 6, in part, not Weinm.

Rare. Waterbury, in waste ground (B. B. Bristol, A. E. Blewitt). July. Adventive or fugitive from the North or West.

Rumex altissimus Wood (tallest).

Tall, Pale or Peach-leaved Dock.

Rare. Waste ground: Plainfield (J. L. Sheldon), New London (Graves), Guilford (G. H. Bartlett), Farmington (A. W. Driggs), Waterbury (J. M. Richardson), Naugatuck (B. B. Bristol), Stratford (Mrs. R. H. Russell). July. In Connecticut probably adventive from the West.

Rumex verticillatus L. (whorled).

Swamp Dock.

Rare. Open low or swampy ground along the Connecticut River: Lyme (Graves), Haddam and East Hartford (Weath-

erby), Glastonbury (Bissell), Hartford (Harger, Bissell).
June—July.

Rumex obtusifolius L. (blunt-leaved).

Bitter, Broad or Blunt-leaved Dock.

Common. Fields, waste places and about habitations.
June—Aug. Naturalized from Europe.

The root is medicinal.

Rumex Acetosa L. (sour).

Sorrel or Belleville Dock. Cock, Garden or Meadow Sorrel.

Rare. In grassland: Norwich (Mrs. E. E. Rogers),
Southington (Bissell, Andrews), Litchfield (W. Buell). May
—June. Adventive from Europe.

Sometimes cultivated for spring greens.

Rumex Acetosella L. (diminutive of *Acetosa*).

Sheep, Red, Field, Common, House or Cow Sorrel. Sour
Grass.

Common. Fields, waste places and cultivated ground,
usually in poor neglected soil. April—June. Naturalized
from Europe.

Often a troublesome weed, especially in lawns where it
persists even when frequently cut. The leaves are eaten by
children, but are poisonous when eaten freely. Sometimes
used for spring greens. Medicinal.

POLYGONUM L. Knotweed.

Polygonum exsertum Small (protruding).

Rare. Salt and brackish marshes: East Haven (Harger,
A. L. Winton), Orange (Bissell), Westport and Stamford
(Eames & C. C. Godfrey). Fruit Sept.—Oct.

Polygonum prolificum (Small) Robinson (producing off-
spring; fruitful).

Polygonum ramosissimum Michx., var. *prolificum* Small.

Occasional eastward and frequent or locally common west-
ward in marshes and on shores along the coast; also occurs
along a moist roadside in Litchfield (Bissell). Fruit Aug.—
Oct.

Polygonum aviculare L. (pertaining to birds).

Doorweed. Knotweed. Wire, Goose, Way, Knot or Crab Grass. Bird's-tongue.

Common. Yards, waste places, roadsides and cultivated grounds. June — Oct.

A pernicious weed in lawns, often taking complete possession. The seeds are eaten by certain birds; the Chinese also extract a blue dye from the plant.

Polygonum aviculare L., var. **littorale** (Link) Koch (of the sea-shore).

Polygonum littorale Link.

Shore Knotweed.

Occasional on edges of salt marshes and on gravelly shores near the coast. July — Sept.

Polygonum aviculare L., var. **vegetum** Ledeb. (vigorous).

This variety has been collected at a few localities and doubtless occurs occasionally with the typical form. Its distribution is not known. July — Sept.

Polygonum erectum L. (erect).

Erect Knotweed or Goose Grass.

Frequent. Roadsides and waste places. July — Sept.

Polygonum ramosissimum Michx. (much-branched).

Bushy Knotweed.

Rare. Roadside in Ansonia, probably introduced from the West (Harger). Aug.—Oct. Native in the West.

The forma **ATLANTICUM** Robinson, our native representative of this species, is frequent about the borders of salt meadows and on tidal shores along the coast.

Polygonum tenue Michx. (slender).

Slender Knotweed.

Frequent. Dry sterile fields and open sandy or rocky places. July — Sept.

Polygonum lapathifolium L. (dock-leaved).

Polygonum lapathifolium L., var. *incarnatum* Wats.

Polygonum incarnatum of authors and (?) Ell.

Dock-leaved, Pale or Willow Persicaria.

Rare, local or occasional. Waste places and banks of

rivers and ponds throughout. July — Aug. Perhaps in part naturalized from Europe.

Polygonum amphibium L. (growing on land or in water equally well).

Water Persicaria.

Rare or local. Ponds and lakes: Preston (Graves), East Haven (D. C. Eaton, Eames), Milford (Harger), Southington (Andrews, Bissell), Norfolk (J. H. Barbour), Ridgefield and Kent (Eames), Salisbury (Mrs. C. S. Phelps & Bissell). Aug.— Sept.

The var. TERRESTRE Leers (terrestrial) occurs rarely on borders of ponds.

The var. HARTWRIGHTII (Gray) Bissell, *Polygonum Hartwrightii* Gray, is rare or local on borders of ponds: Preston and Griswold (Graves), Southington (Andrews & Bissell), Norfolk (J. H. Barbour), Salisbury (Bissell).

This species is remarkably variable according to the conditions under which it grows. Intergrading forms connect the typical form with the varieties and apparently with the following species also.

Polygonum Muhlenbergii (Meisn.) Wats.

Polygonum emersum Britton.

Banks and shallow water about marshes, ponds and streams. Frequent along the Connecticut River; rare or local elsewhere. Aug.— Sept.

Polygonum pennsylvanicum L.

Common or Pink Persicaria. Pink Knotweed.

Frequent. Moist rich soil in open situations. July — Oct. Often a troublesome weed.

Polygonum Careyi Olney.

Rare. Moist or wet sandy soil about ponds and in open swamps: Ellington (F. M. Pease), East Hartford (Weatherby), East Windsor, Windsor and Simsbury (Bissell), Southington (Andrews, Bissell), Waterbury (Andrews), Oxford and Beacon Falls (Harger), Milford and Stratford (Eames). July — Sept.

Polygonum Hydropiper L. (its classical name).

Common Smartweed or Water Pepper. Bite-tongue.

Frequent. Open wet rich soil. July — Oct.

In popular use medicinally, and in veterinary practice as a counter-irritant.

Polygonum acre HBK. (acid; biting).

Polygonum punctatum Ell.

Smartweed. Water Smartweed.

About ponds, pools, swamps and wet places, especially in woods and shaded situations. Southington, rare (Bissell, Andrews); frequent in the southern part of the state. July — Sept.

Medicinal like *Polygonum Hydropiper*.

Polygonum acre HBK., var. *leptostachyum* Meisn. (slender-spiked).

Polygonum punctatum Ell., var. *leptostachyum* Small.

Rare or local. Shallow water about ponds, swamps and banks of streams: Waterford (Graves), Lyme (Bissell), East Hartford and Simsbury (Weatherby), Southington (Andrews, Bissell), Stratford (Eames), Waterbury (Andrews). July — Sept.

Polygonum orientale L. (eastern).

Ragged Sailor. Kiss-me-over-the-Fence. Prince's Feather.

Rare or occasional. Waste places as an escape from old gardens. July — Sept. Adventive from India.

An old-fashioned plant still frequent in cultivation.

Polygonum Persicaria L. (like a Peach-tree; referring to the shape of the leaves).

Lady's Thumb. Heartweed. Heart's-ease. Pinkweed. Red-shank.

Common. Cultivated grounds, fields, roadsides and waste places. June — Oct. Naturalized from Europe.

Sometimes a troublesome weed. Medicinal.

Polygonum hydropiperoides Michx. (like *Polygonum Hydropiper*, the Water Pepper).

Smartweed. Water Smartweed. Mild Water Pepper.

Frequent. Shallow water of swamps, margins of ponds and streams. July — Sept.

Polygonum virginianum L.

Frequent. Woods and thickets in rich soil. July — Sept.

Polygonum arifolium L. (arum-leaved).

Halberd-leaved Tear-thumb. Scratch or Sickie Grass.

Occasional. Swamps, wet woods and thickets. July — Oct.

Sometimes used medicinally.

Polygonum sagittatum L. (arrow-head shaped).

Arrow-leaved Tear-thumb. Scratch Grass.

Frequent. Swamps and wet places. June — Oct.

Polygonum Convolvulus L. (like Convolvulus, the Bindweed).

Wild Buckwheat. Black, Corn, Sow or Blackbird Bindweed.

Frequent or common. Cultivated or waste grounds. June — Oct. Naturalized from Europe.

Polygonum cilinode Michx. (having fringed nodes).

Fringed Black Bindweed.

Rocky woods and more open places. Rare over most of its range: North Stonington (Graves), Norwich (Mrs. E. E. Rogers), Farmington (Weatherby), New Haven, Seymour and Naugatuck (Harger), Waterbury (A. E. Blewitt), Hamden and Monroe (Eames). Occasional throughout northern Litchfield County. June — Sept.

The var. *ERECTUM* Peck (upright), var. *breve* Peck, occurs with the species in Litchfield County.

Sometimes used as a cover-plant for rocks.

Polygonum scandens L. (climbing).

Polygonum dumetorum L., var. *scandens* Gray.

Climbing False or Wild Buckwheat. Hedge, Bush or Thicket Bindweed.

Common. Thickets and waste places. Aug.— Oct.

Polygonum dumetorum L. (of thickets).

Bush or Thicket Buckwheat or Bindweed.

Rare. On ledges or rocky banks, in open woods or partial shade: Stratford, Trumbull and Huntington (Eames), Wood-

bury (Eames & C. C. Godfrey), New Milford (Eames & E. H. Austin), Salisbury (Mrs. C. S. Phelps). Also in waste ground at Hartford (H. S. Clark). Aug.—Oct. Except in the last locality it appears to be native. Specimens from Milford (Eames) show a transitional form approaching the form *cristatum* (Engelm. & Gray) Robinson, *Polygonum cristatum* Engelm. & Gray.

Polygonum cuspidatum Sieb. & Zucc. (sharp-pointed).

Polygonum Zuccarinii Small.

Japanese Knotweed.

Rare. Escaped from cultivation to waste places: Stonington and New London (Graves), New Haven (J. N. Bishop), Simsbury (Bissell), Bridgeport (Eames). Sept. Adventive from Japan.

An effective plant in masses, producing abundant bloom.

Polygonum sachalinense Schmidt.

Sacaline.

Rare. Tolland, well established in a field and along a roadside (Weatherby & Bissell). Aug.—Sept. Native of eastern Asia.

A coarse forage and ornamental plant recently introduced into this country; perfectly hardy, but of little value where other crops can be grown.

FAGOPYRUM Hill. Buckwheat.

Fagopyrum esculentum Moench (eatable).

Fagopyrum Fagopyrum Karst.

Buckwheat. Beech-wheat.

Occasional. Fields and roadsides, escaping from cultivation but not persisting. June — Oct.; fruit Aug.—Oct. Fugitive from Europe.

Cultivated for its seeds which are ground for food or fed to poultry. The flowers are much frequented by honey-bees.

POLYGONELLA Michx. Jointweed.

Polygonella articulata (L.) Meisn. (jointed).

Sand, Coast or Seaside Jointweed or Knot Grass.

Frequent on barren sands in the Connecticut Valley and

the southeastern part of the state, as well as the coastal dunes and beaches throughout; occasional or rare elsewhere in similar situations. Mid-July — Oct.

CHENOPODIACEAE. GOOSEFOOT FAMILY.

CYCLOLOMA Moq. Winged Pigweed.

Cycloloma atriplicifolium (Spreng.) Coulter (having leaves like *Atriplex*).

Cycloloma platyphyllum Moq.

Cycloloma. Winged Pigweed.

Rare. Hamden, in dry ground (Miss Edwards, J. N. Bishop). July — Aug. Fugitive from the West.

KOCHIA Roth.

Kochia Scoparia (L.) Schrad. (broom-like).

Mexican Fire Plant. Mock Cypress.

Rare. Hartford, escaped from cultivation to waste ground (H. S. Clark & Weatherby). Sept. Fugitive or adventive from Europe.

Cultivated for its brilliant autumnal foliage.

CHENOPODIUM L. Goosefoot. Pigweed.

Chenopodium ambrosioides L. (like Ambrosia, the Ragweed).

Wormseed. Mexican Tea. Sweet Pigweed.

Waste places and roadsides. Rare or local, or in populous districts even frequent or common. Aug.— Oct. Naturalized from tropical America.

The seeds are sometimes used medicinally and were formerly official.

Chenopodium ambrosioides L., var. *anthelminticum* (L.) Gray (opposed to worms).

Chenopodium anthelminticum L.

Wormseed.

Rare. Bridgeport, in waste ground (Eames). Aug.— Oct. Adventive from tropical America.

Chenopodium Botrys L. (a cluster of grapes; referring to the shape of the inflorescence).

Feather Geranium. Wormseed. Jerusalem Oak. Ambrosia. Ambrose.

Waste places and roadsides. Rare in most districts: Norwich (Mrs. E. E. Rogers), New Haven (D. C. Eaton), Hartford (H. S. Clark), Plainville (Bissell), Southington (Andrews), Oxford (Harger), New Milford (C. K. Averill). Occasional at New London (Graves), and throughout the southwestern part of the state (Eames). July—Sept. Naturalized from Europe.

The seeds are sometimes used medicinally.

Chenopodium capitatum (L.) Aschers. (having heads; referring to the clusters of fruit).

Blitum capitatum L.

Strawberry Blite or Spinach.

Rare. Waterbury, in waste ground (J. M. Richardson), Huntington, a few plants in dry soil near the Housatonic River (Miss A. Wakely). June—July.

Fugitive from the West or from Europe.

Sometimes cultivated as a pot-herb.

Chenopodium rubrum L. (red).

Red or Coast Goosefoot or Blite.

Rare on salt marshes: Guilford (G. H. Bartlett), Fairfield (Eames). Aug.—Oct.

Chenopodium glaucum L. (glaucous).

Oak-leaved Goosefoot.

Local. Bridgeport, plentiful along a sandy roadside (Eames). Aug.—Oct. Adventive from Europe.

Chenopodium hybridum L. (mongrel).

Maple-leaved Goosefoot. Sowbane.

Occasional. Roadsides, waste places and river banks. July—Oct. Native, or in part naturalized from Europe.

Chenopodium album L. (white).

Pigweed. White Goosefoot. Lamb's Quarters. Wild Spinach.

Common. Waste places, on sandy shores and as a weed in cultivated ground. June—Sept. Naturalized from Europe.

The var. *VIRIDE* Moq. (green) is frequent with the typical form.

Sometimes troublesome as a weed. Occasionally used as a pot-herb.

Chenopodium murale L. (of walls).

Nettle-leaved Goosefoot. Sowbane.

Rare. Waste places: New London, as a gutter-weed (Graves), New Haven (W. A. Setchell), Fairfield (Eames). June — Sept. Adventive from Europe.

Chenopodium urbicum L. (of the city).

City or Upright Goosefoot.

Rare. Waste places in rich soil: Ledyard (Graves), Oxford (Harger), Naugatuck (A. E. Blewitt & Harger). Mid-May — Aug. Adventive from Europe.

Chenopodium Boscianum Moq.

Rare. Rocky woods: Southington and Meriden (Andrews, Bissell). Aug.—Sept.

Chenopodium leptophyllum Nutt. (slender-leaved).

Rare. Coastal beaches, sand dunes and sandy borders of salt marshes: Groton (Graves), New Haven (F. W. Hall), Milford (Harger, Eames), Stratford (Miss A. E. Carpenter, Eames), Bridgeport, Westport and Norwalk (Eames). Aug. — Sept.

BETA L. Beet.**Beta vulgaris** L. (common).

Common Beet.

Rare and fugitive. Waste grounds: Bridgeport (Eames). July. Native of southern Europe.

ATRIPLEX L. Orach.**Atriplex tatarica** L.

Atriplex laciniata Koch and many authors, not L.

Rare. Naugatuck, in waste ground (A. E. Blewitt). Aug. Fugitive from Europe.

Atriplex patula L. (spreading).

Spreading Orach.

Rare or occasional on the shores of the Sound.

The var. **HASTATA** (L.) Gray (halberd-shaped), *Atriplex hastata* L., is the usual form of this variable species, and is common on the shores of the Sound and edges of salt marshes,

extending inland along the Connecticut River as far as Hartford (H. S. Clark); also occurs in waste ground at Bristol (C. D. Bishop), Naugatuck (A. E. Blewitt), and Litchfield (Miss E. H. Thompson). Aug.—Sept.

The leaves are sometimes eaten as a pot-herb.

Atriplex arenaria Nutt. (of sand).

Beach Orach.

Rare or local. Sandy or gravelly shores of the Sound and adjacent waters: Groton and Stonington (Graves), East Haven (Harger), Milford (Eames, Harger), Stratford and westward (Eames). Aug.—Oct.

SALICORNIA L. Samphire. Glasswort.

Salicornia mucronata Bigel. (having a short, abrupt and small tip).

Salicornia Bigelovii Torr.

Samphire. Glasswort. Pickle Plant.

Frequent on salt marshes along the coast. Aug.—Sept.

Sometimes gathered for pickling.

Salicornia europaea L.

Salicornia herbacea L.

Samphire. Glasswort. Pickle Plant. Chicken-toes. Crab or Frog Grass.

Frequent or common on salt marshes and shores. Aug.—Sept.

Often gathered for pickling.

Salicornia ambigua Michx. (doubtful).

Woody Samphire or Glasswort.

Frequent on stony shores and edges of salt marshes along the coast. Aug.—Sept.

SUAEDA Forskål. Sea Blite.

Suaeda maritima (L.) Dumort. (of the sea-coast).

Dondia maritima Druce.

Low Sea Blite.

Occasional on stony shores along the coast and about salt marshes and tidal rivers. July—Sept.

Suaeda linearis (Ell.) Moq. (very narrow).

Dondia americana Britton, not *Salsola salsa*, var. *americana* Pers.

Tall Sea Blite. Seaside Goosefoot.

Frequent on stony shores along the coast, about salt marshes and near tidal rivers. Aug.—Sept.

SALSOLA L. Saltwort.

Salsola Kali L. (Arabic name).

Common or Prickly Saltwort.

Frequent on sandy shores of the Sound. July — Sept.

In Europe this species was formerly gathered and burned for soda to be used in the manufacture of glass.

Salsola Kali L., var. *tenuifolia* G. F. W. Mey. (fine-leaved).

Salsola Tragus of authors, but scarcely of L.

Russian Thistle.

Rare. Waste ground and along railroads: Hartford (H. S. Clark & Bissell), Southington (Andrews, Bissell), Naugatuck (B. B. Bristol), Ansonia (Harger), Bridgeport (Eames). July — Sept. Adventive from the West or from Asia.

The plant is a native of Asia, but is now a very troublesome weed in some parts of the West. It should always be eradicated on its first appearance.

AMARANTHACEAE. AMARANTH FAMILY.

AMARANTHUS L.● Amaranth.

Amaranthus retroflexus L. (bent backward).

Pigweed. Amaranth. Beet-root. Green Amaranth. Rough or Common Pigweed.

Common. Waste places and cultivated ground. July — Oct. Naturalized from tropical America.

A bad weed in cultivated ground.

Amaranthus hybridus L. (mongrel).

Pigweed. Slender Pigweed. Green Amaranth. Careless.

Frequent or common. Cultivated ground and waste places. July — Oct. Naturalized from tropical America.

The forma **HYPOCHONDRIACUS (L.) Robinson** (curing melancholy), *Amaranthus hypochondriacus* L., Prince's

Feather, is cultivated in gardens, and escapes to waste places at Southington and Meriden (Andrews), and Bridgeport (Eames).

The species is often a bad weed in cultivated ground.

Amaranthus paniculatus L. (panicled).

Amaranthus hybridus L., var. *paniculatus* U. & B.

Amaranth. Purple Amaranth.

Occasional. Roadsides, waste places and about old gardens, especially in the more populous districts. July — Oct. Adventive from tropical America.

Amaranthus graecizans L.

Amaranthus albus L.

Tumble Weed. White Amaranth or Pigweed. Bushy Pigweed.

Frequent. Cultivated fields and waste ground. July — Oct.

A weed, but not usually troublesome in this state.

Amaranthus blitoides Wats. (like Blitum, the Blite).

Prostrate Amaranth.

Rare. Roadsides and waste places: Norwich (Mrs. E. E. Rogers), New London (Graves), Hartford (H. S. Clark, Bissell), Naugatuck (A. E. Blewitt & Harger), Waterbury (A. E. Blewitt), Southbury (Harger), Milford, Bridgeport and Norwalk (Eames). July — Sept. Adventive from the West.

Amaranthus spinosus L. (spiny).

Spiny or Thorny Amaranth.

Rare. Waste places: New London (Graves), Norwich (Mrs. E. E. Rogers). July — Sept. Adventive from tropical America.

Amaranthus caudatus L. (tailed).

Prince's Feather. Love-lies-bleeding.

Rare. Escaped from cultivation into waste ground in Bridgeport and Norwalk (Eames). Aug. Native of India.

ACNIDA L. Water Hemp.**Acnida cannabina L.** (like Cannabis, the Hemp).

Salt Marsh Water Hemp.

Common about salt marshes and the borders of tidal creeks and rivers. Aug.—Sept.

Acnida tuberculata Moq. (pimply).*Acnida tamariscina* Wood, var. *tuberculata* U. & B.

Rare. Waste ground on bank of the Connecticut River at Hartford (Bissell), New Milford (E. H. Austin). Aug.—Sept. Fugitive from the West.

Acnida tuberculata Moq., var. prostrata (U. & B.) Robinson (prostrate).*Acnida tamariscina* Wood, var. *prostrata* U. & B.

Rare. Cultivated ground at Oxford (Harger). Aug.—Sept. Fugitive from the West.

PHYTOLACCACEAE. POKEWEED FAMILY.**PHYTOLACCA L. Pokeweed.****Phytolacca decandra L.** (ten-stamened).

Common Pokeweed, Poke or Scape. Garget. Pigeon Berry. American Nightshade. Ink Berry. Red Ink Plant. Poke Root.

Frequent. Woods, fields and waste places, especially on burnt lands. July — Oct.

The young leaves and shoots make an excellent pot-herb, but care must be taken to exclude any part of the root. The berries and root have medicinal virtues and are officinal. The root is externally applied to caked udders of cows, and the berries are sometimes employed to color vinegar. The roots have been mistaken for Horseradish, with fatal results, and the plant has proved fatal to cattle eating it.

NYCTAGINACEAE. FOUR-O'CLOCK FAMILY.**MIRABILIS L. Four-o'clock.****Mirabilis Jalapa L.** (producing jalap).

Four-o'clock. Marvel of Peru.

Rare. Escaped from cultivation at Bridgeport (Eames). Aug.—Oct. Fugitive from tropical America.

A desirable garden plant often cultivated for ornament.

OXYBAPHUS L'Hér.

Oxybaphus nyctagineus (Michx.) Sweet (like *Nyctaginia*, a genus of this family).

Allionia nyctaginea Michx.

Umbrellawort.

Rare. Granby, in fields (I. Holcomb). June — Aug. Introduced from the West.

Oxybaphus hirsutus (Pursh) Sweet (hairy).

Allionia hirsuta Pursh.

Umbrellawort.

Rare. Southington, field in dry gravelly soil (Andrews). July — Aug. Introduced from the West.

Oxybaphus linearis (Pursh) Robinson (very narrow).

Oxybaphus angustifolius Sweet.

Allionia linearis Pursh.

Umbrellawort.

Rare. North Haven, in sandy waste ground (A. W. Evans). June — Aug. Introduced from the West.

ILLECEBRACEAE. KNOTWORT FAMILY.**SCLERANTHUS L. Knapel.**

Scleranthus annuus L. (annual).

Knotweed. German Knot Grass. Gravel Chickweed.

Frequent. Dry, sandy or sterile fields and roadsides. May — Nov. Naturalized from Europe.

ANYCHIA Michx. Forked Chickweed.

Anychia polygonoides Raf. (like *Polygonum*, the Knotweed).

Anychia dichotoma of American authors, not Michx.

Rare. Norwalk, railroad track at Wilson's Point (C. K. Averill). June — Sept. Fugitive from the West.

Anychia canadensis (L.) BSP.

Anychia dichotoma Michx., but not of late American authors.

Anychia capillacea DC.

Forked Chickweed.

Occasional or frequent. Dry, often rocky woods. June — Sept.

AIZOACEAE. CARPET WEED FAMILY.**MOLLUGO L. Indian Chickweed.**

Mollugo verticillata L. (whorled).

Carpet Weed. Indian Chickweed.

Common. Waste places, roadsides, cultivated ground and on coastal beaches. June — Oct. Naturalized from the warmer parts of America.

Sometimes a troublesome weed.

TETRAGONIA L.

Tetragonia expansa Murr. (spread out).

New Zealand Spinach.

Local. Waste ground: Hartford, where hundreds of plants were growing in one locality (H. S. Clark), Fairfield (Eames). Sept. Fugitive from Eastern Asia or New Zealand.

CARYOPHYLLACEAE. PINK FAMILY.**SPERGULARIA J. & C. Presl. Sand Spurrey.**

Spergularia rubra (L.) J. & C. Presl (red).

Buda rubra Dumort.

Tissa rubra Britton.

Sand Spurrey. Sandwort.

Frequent, especially near the coast. Dry, sandy or gravelly roadsides, paths and waste places. June — Sept.

Spergularia marina (L.) Griseb. (of the sea).

Buda marina Gray's Manual ed. 6.

Tissa marina Britton.

Salt Marsh Sand Spurrey. Seaside Sandwort or Spurrey.

Common on coastal shores and borders of salt marshes.

June — Aug. Medicinal.

SPERGULA L. Spurrey.

Spergula arvensis L. (of cultivated ground).

Corn, Sand or Common Spurrey. Tares. Cow-quake. Sandweed. Beggar-weed.

Rare or local. Roadsides, waste places and cultivated ground throughout. June — Nov. Naturalized from Europe.

It is said to be a nutritious and quick crop for fodder or hay, adapted to and a renovator of dry sandy soils. Apt to become a nuisance in some situations.

Spergula sativa Boenn. (sown).

Field Spurrey.

Rare. New London, in a cultivated field (Graves), Norwalk, sandy waste (Eames). July — Aug. Adventive from Europe.

SAGINA L. Pearlwort.

Sagina decumbens (Ell.) Torr. & Gray (reclining).

Sagina apetala of American authors, not Ard.

Small-flowered, Annual or Spurrey Pearlwort.

Rare or local. Dry soil of roadsides, walks and waste places: Ledyard (Graves), Woodbury (Harger). Throughout the coast region of the southwestern part of the state, where it also occurs in low or moist woods (Eames). Mid-May — Aug.

Sagina procumbens L. (trailing).

Pearlwort. Break-stone. Bird's-eye.

Occasional or frequent. Dripping rocks and wet, springy places in woods or partial shade, also dry banks, crevices of walls and walks and in stony or sandy wastes or sometimes on sea-beaches. May — July.

ARENARIA L. Sandwort.

Arenaria lateriflora L. (flowering at the side).

Moehringia lateriflora Fenzl.

Blunt-leaved or Showy Sandwort.

Occasional or frequent. Moist or dry, rocky, or low woods, meadows and even sometimes on sea-beaches. Mid-May — June.

Arenaria macrophylla Hook. (large-leaved).

Moehringia macrophylla Torr.

Larged-leaved Sandwort.

Rare. In rather dry leaf-mold covering trap talus, in shade: Guilford (G. H. Bartlett), and in the adjoining town of Durham (Harger). May.

***Arenaria peploides* L. (like *Euphorbia Peplus*).**

Ammodenia peploides Rupr.

Sea Beach Sandwort. Sea Chickweed or Purslane.

Sandy and stony shores of the Sound. Rare in Bridgeport (Eames), and Stratford (Miss A. E. Carpenter); frequent in New London County (Graves); not reported elsewhere. May—June.

***Arenaria serpyllifolia* L. (thyme-leaved).**

Common or Thyme-leaved Sandwort.

Frequent or common. Dry, sandy or rocky open ground. May—July. Naturalized from Europe.

***Arenaria stricta* Michx. (upright).**

Arenaria Michauxii Hook. f.

Rock Sandwort.

Local. Limestone ledges and banks throughout western Litchfield County and south to Brookfield (Eames). June—July.

***Arenaria groenlandica* (Retz.) Spreng.**

Mountain Sandwort or Starwort.

Rare. Rock ledges; White Rocks, Middletown, where it was first collected by H. L. Osborn in 1877, and Durham (G. H. Bartlett). Mid-April—May.

STELLARIA L. Starwort. Chickweed.***Stellaria borealis* Bigel. (northern).**

Alsine borealis Britton.

Northern Stitchwort or Starwort.

Rare. Bogs, wet meadows and banks of woodland brooks: Groton and Ledyard (Graves), Durham, Oxford and Monroe (Harger), Southington (Andrews), New Britain and Norfolk (Bissell), Barkhamsted (Harger), Winchester (Andrews, Bissell & Harger), Salisbury (Mrs. C. S. Phelps). May—Aug.

***Stellaria longifolia* Muhl. (long-leaved).**

Alsine longifolia Britton.

Long-leaved Stitchwort or Starwort.

Swamps, low meadows and wet places. Rare in the south-

eastern part of the state: Franklin and Colchester (Graves).
Frequent elsewhere. Mid-May — June.

***Stellaria graminea* L. (grass-like).**

Alsine graminea Britton.

Stellaria graminea L., var. *lanceolata* Fenzl.

Lesser Stitchwort or Starwort.

Wet or dry grassland, roadsides and waste places. Occasional northward; frequent near the coast. June — July.
Naturalized from Europe.

***Stellaria Holostea* L. (classical name).**

Alsine Holostea Britton.

All-bone. Easter Bell. Greater Stitchwort or Starwort.

Rare. Woodbury, rich open woods (Eames & C. C. Godfrey); Norwalk, dry open wastes in Union Cemetery (Miss A. E. Carpenter). May — June. Naturalized from Europe.

***Stellaria media* (L.) Cyrill (intermediate).**

Alsine media L.

Common or Winter Chickweed. Tongue Grass. White Bird's-eye.

Common. Waste places about dwellings, cultivated ground and lawns. Feb. — Dec. Naturalized from Europe.

Sometimes a troublesome weed, especially in damp soil.
Medicinal.

CERASTIUM L. Mouse-ear Chickweed.

***Cerastium arvense* L. (of cultivated ground).**

Field or Meadow Chickweed.

Rare. Lawns, fields, rocky banks and on ledges, usually in dry, sandy or sterile soil: New London (Graves), Norwich (Mrs. E. E. Rogers), East Lyme (Mrs. F. H. Dart), Middletown (M. Hitchcock), East Windsor (Bissell), Southington (Andrews & Bissell), New Haven, on West Rock (Harger, Eames et al.), Waterbury (A. E. Blewitt), Seymour and Oxford (Harger). May — mid-June.

***Cerastium vulgatum* L. (common).**

Common or Larger Mouse-ear Chickweed.

Common. Woods, fields, cultivated ground and waste places. Mid-April — Oct. Naturalized from Europe.

A persistent and bad weed in lawns.

Cerastium semidecandrum L. (five-stamened).

Spring Mouse-ear. Small Mouse-ear Chickweed.

Local. East Lyme, plentiful in dry fields and pastures near the Niantic River (Graves). May—June. Naturalized from Europe.

Cerastium nutans Raf. (nodding).

Cerastium longipedunculatum of Britton's Manual.

Nodding Chickweed. Powder-horn.

Rare or local. Moist hillside woods and drier more or less open places: Norwich (Mrs. E. E. Rogers), East Lyme (Miss A. M. Ryon), West Hartford (H. S. Clark), Farmington and Newington (Bissell), Hamden (O. D. Allen), Orange and Oxford (Harger), Huntington, Trumbull, Milford and Stratford (Eames), Wilton (Miss A. E. Carpenter). Also at East Hartford, as a weed in greenhouse soil (A. W. Driggs). May—June.

The form with apetalous flowers often occurs.

AGROSTEMMA L. Corn Cockle.**Agrostemma Githago** L. (like Gith, the Fennel-flower).

Lychnis Githago Scop.

Cockle. Corn Cockle. Rose Pink or Campion.

Rare or local. Grain fields, cultivated ground and waste places. June—July. Adventive from Europe.

In the West, where it is often abundant, its seeds injure the appearance and quality of grain. Its seeds are poisonous to poultry and stock, and flour containing a considerable proportion of them has been made into bread and eaten with fatal results. Thorough baking, however, destroys the poison. Chronic poisoning due to the regular consumption of small quantities, and finally resulting fatally, has been observed in animals. The presence of Corn Cockle seeds in flour is easily detected, unless it has been well bolted, by the black, roughened scales of the seed coat.

LYCHNIS L. Campion.**Lychnis Coronaria** (L.) Desr. (pertaining to a crown).

Mullein Pink or Lychnis. Rose Campion. Dusty Miller.

Rare. Roadsides and waste places as an escape from cul-

tivation: Southington (Andrews, Bissell), Cheshire (Harger), Bridgeport and Fairfield (Eames). Mid-June — Aug. Native of Europe.

***Lychnis Flos-cuculi* L. (cuckoo-flower).**

Ragged Robin, Jack or Lychnis. Meadow Pink or Campion.

Rare or local. Fields and meadows, probably introduced with grass seed: Waterford (Graves), Norwich, plentiful in a meadow (Mrs. E. E. Rogers, J. Trumbull), Middletown (J. H. Barbour), Hartford, plentiful in several fields (H. S. Clark & Bissell), Canton (Weatherby), Salisbury (Mrs. C. S. Phelps). Mid-May — June. Naturalized from Europe.

***Lychnis chalcedonica* L.**

Maltese or Jerusalem Cross. Nonesuch.

Rare. Roadsides and about old houses: Oxford and Southbury (Harger), Bridgeport (Eames). July. Adventive from Japan.

***Lychnis dioica* L. (dioecious).**

Lychnis diurna Sibth.

Red, Morning or Day-blooming Lychnis or Campion. Red or Poor Robin.

Rare. Moist or dry roadsides and waste places: Norwich (Mrs. E. E. Rogers), Groton (Bissell), New London (Graves), Guilford (G. H. Bartlett), East Haven (Eames), New Haven (D. C. Eaton, Harger), Meriden (Andrews), Southington (Bissell, Andrews), Darien (Mrs. W. D. Barclay). June — Sept. Adventive from Europe.

Frequent in old-fashioned gardens.

***Lychnis alba* Mill. (white).**

Lychnis vespertina Sibth.

Evening or Ever-blooming Lychnis. White Campion or Robin. Bull-rattle.

Roadsides, fields and waste places, in either dry or moist ground. Common in New London County (Graves); frequent or locally common in Kent and New Milford (C. K. Averill, E. H. Austin); occasional, local or rare elsewhere. June — Sept. Naturalized from Europe.

SILENE L. Catchfly. Campion.**Silene antirrhina L.** (like *Antirrhinum*, the Snapdragon).

Sleepy or Snapdragon Catchfly.

Frequent or common. Dry fields, roadsides, sandy places and on rocks and ledges. Mid-May—July.

Silene antirrhina L., var. *divaricata* Robinson (widely divergent).

Rare. Dry, sandy banks or sterile soil of ledges: Southington (Andrews), Milford and Stratford (Eames), Seymour and Oxford (Harger), Warren (in Herb. C. W. Swan). May—June.

Silene Armeria L. (like *Armeria*, the Thrift).

None-so-pretty. Sweet William, Garden or Lobel's Catchfly.

Sweet Susan. Pretty Nancy.

Rare. Escaped from gardens to roadsides and waste places. June—Sept. Native of Europe.

Silene dichotoma Ehrh. (forked).

Forked Catchfly.

Rare. Waste places, fields and grasslands: New London (Graves), Southington (Andrews, Bissell), Bristol (J. N. Bishop), East Windsor and Norfolk (Bissell), Seymour (Harger), Bridgeport (Eames), Wilton (Miss A. E. Carpenter), New Milford (Eames & E. H. Austin), Salisbury (Mrs. C. S. Phelps). June—Aug. Adventive from Europe.

Silene noctiflora L. (night-flowering).

Catchfly. Night-flowering Catchfly.

Rare. Roadsides and waste places about dwellings: Norwich (W. A. Setchell), Southington (Andrews, Bissell), Guilford (G. H. Bartlett and Bissell), North Branford and Oxford (Harger), Bridgeport and Fairfield (Eames). Mid-June—Oct. Adventive from Europe.

Silene pennsylvanica Michx.*Silene caroliniana* of recent authors, perhaps of Walt.

Wild Pink. Fire Pink.

Dry, sandy soil, especially on banks. Rare or local in most districts: along the Thames River from Norwich southward (Graves), Colchester (Dr. E. J. Thompson), Scotland and

Windham (G. Waldo), North Haven (Harger), Woodbury (Eames & C. C. Godfrey), Newtown (J. P. Blackman), Brookfield (Eames). Becoming occasional in the southwestern part of the state. May — mid-June.

A handsome plant in cultivation.

***Silene stellata* (L.) Ait.f. (starry).**

Starry Campion. Four-leaved Campion.

Rocky woods and thickets. Rare in its most northerly and easterly reported localities: New Milford (Eames), Beacon Falls (Harger), Plainville (Bissell), Simsbury (A. W. Driggs), Newington (H. S. Clark), Middletown (Harger), Old Lyme (Graves), East Lyme (Miss A. M. Ryon). Frequent near the coast westward. Mid-July — Sept.

A handsome plant and worthy of cultivation.

***Silene latifolia* (Mill.) Britten & Rendle (broad-leaved).**

Silene Cucubalus Wibel.

Silene vulgaris Garcke.

Bladder Campion. Behen. Rattle Bags. Cow Bells.

Occasional or frequent. Grassland, roadsides and waste places. June — Sept. Naturalized from Europe.

SAPONARIA L.

***Saponaria officinalis* L. (of the shops).**

Bouncing Bet. Soapwort. Old-maid's or Hedge Pink.

Common. Fields, roadsides and waste places. July — Oct. Naturalized from Europe.

The plant has active medicinal properties, but is now seldom used. Often occurs with double flowers.

***Saponaria Vaccaria* L. (cow-herb).**

Vaccaria Vaccaria Britton.

Cow-herb. Field Soapwort. Cow-rattle. Cockle.

Rare. Cultivated ground and waste places: Norwich (Mrs. E. E. Rogers), East Lyme (Miss A. M. Ryon), New Haven (D. C. Eaton), Mansfield and Salisbury (Mrs. C. S. Phelps), Hartford (Bissell), Southington (Andrews, Bissell), Waterbury (Mrs. C. H. Lyman, Jr.), Bridgeport and Fairfield (Eames), New Milford (E. H. Austin). June — July. Introduced from Europe.

GYPSOPHILA L.***Gypsophila muralis* L. (of walls).**

Gypsophyll. Mist.

Rare. Roadside in Granby, escaped from cultivation (I. Holcomb). June — Sept. Fugitive from Europe.

. *Gypsophila elegans* Bieb. (elegant).

Rare. Southington, escaped from cultivation to field (Andrews).. June — July. Fugitive from Asia.

DIANTHUS L. Pink. Carnation.***Dianthus deltoides* L. (triangular).**

Maiden Pink. Meadow Pink.

Rare. Roadsides and waste ground: South Windsor (C. C. Hanmer), Plainville (J. N. Bishop), Bristol (W. A. Terry), Litchfield (Miss E. H. Thompson, Bissell). June — July. Adventive from Europe.

***Dianthus barbatus* L. (bearded).**

Sweet William. Bunch or French Pink. Bloomy-down.

Rare. Roadsides and waste places as an escape from cultivation: Lebanon (Mrs. C. B. Graves), Guilford (G. H. Bartlett), Southington (Bissell, Andrews), Southbury (Harger), Fairfield (Eames), Redding (Eames & C. C. Godfrey), Salisbury (Mrs. C. S. Phelps). June — July. Introduced from Europe.

***Dianthus Armeria* L. (like Armeria, the Thrift).**

Deptford Pink.

Dry fields and roadsides and in woods. Occasional northward and frequent or locally common throughout the southern part of the state. July — Sept. Naturalized from Europe.

***Dianthus plumarius* L. (feathery).**

Grass, Garden, Scotch or Pheasant's-eye Pink.

Rare. Escaped from cultivation: Thompson, in an old cemetery near Wilsonville where it is spontaneous in the grass (Graves). May — June. Introduced from Europe.

PORTULACACEAE. PURSLANE FAMILY.

CLAYTONIA L. Spring Beauty.

Claytonia virginica L.

Spring Beauty. Mayflower.

Rich moist woods and more open places. Occasional or frequent in the southwestern part of the state; rare or local elsewhere. April — May.

Easily cultivated in suitable situations.

Claytonia caroliniana Michx.

Spring Beauty. Broad-leaved Spring Beauty.

Rare or local. Rich moist woods: Middletown (M. Hitchcock), Bristol (W. A. Terry), Barkhamsted (A. E. Blewitt), Torrington (Miss B. A. Parker), New Milford (E. H. Austin), Cornwall (Miss J. T. Gregory), Salisbury (Mrs. C. S. Phelps). Late March — April.

PORTULACA L. Purslane.

Portulaca oleracea L. (suitable for a pot-herb).

Purslane. Pusley.

Common. Cultivated and waste ground. June — Sept. Naturalized from the South or from Europe; now cosmopolitan.

A bad weed in any cultivated ground, especially in onion fields. Difficult to eradicate because of its tenacity of life, rapid growth and prolific seeding. Excellent as a pot-herb, and some strains are cultivated for this use.

Portulaca grandiflora Hook. (large-flowered).

Portulaca. Garden or Showy Portulaca. Wax Pinks. Garden or French Purslane. Rose Moss. Sun-plant.

Rarely escaped from gardens into waste places: Bridgeport and Norwalk (Eames), Ansonia (Harger). July — Oct. Fugitive from South America.

CERATOPHYLLACEAE. HORNWORT FAMILY.

CERATOPHYLLUM L. Hornwort.

Ceratophyllum demersum L. (submerged).

Frequent. Ponds, pools and slow streams. June — July.

The var. *ECHINATUM* Gray (prickly) is frequent in the

southwestern part of the state (Eames), reaching eastward to New Haven (D. C. Eaton) and northward to Middlebury and Woodbury (Harger). The fruit, July — Aug., is often present in the variety, not seen otherwise.

NYMPHAEACEAE. WATER LILY FAMILY.

NYMPHAEA L. Yellow Pond Lily. Spatter-dock.

Nymphaea advena Ait. (a stranger).

Nuphar advena Ait. f.

Yellow Pond Lily. Spatter-dock. Frog, Cow, Hog, Bull-head or Horse Lily. Brandy Bottle.

Common. Ponds, pools and slow streams. Mid-May — Sept.

The var. **VARIEGATA** (Engelm.) Fernald (variegated) has been found in Salisbury (C. C. Godfrey), Goshen (L. M. Underwood), Kent (Eames).

The rhizome is medicinal.

× (?) **Nymphaea rubrodisca** (Morong) Greene (red-disked).

Nuphar advena Ait. f., var. *minus* Morong.

Rare. In ponds: Norfolk (J. H. Barbour), Trumbull, Eames). June — Aug.

Nymphaea microphylla Pers. (small-leaved).

Nymphaea Kalmiana Sims.

Nuphar Kalmianum Ait. f.

Small Yellow Pond Lily.

Rare or local. Ponds and still water: Lyme (Graves, Bissell), Windham (J. W. Robbins), North Haven (Bissell), Milford (Eames), Derby (H. C. Beardslee), Watertown (Harger), Norfolk (J. H. Barbour). June — Aug.

CASTALIA Salisb. Water Lily. Water Nymph.

Castalia odorata (Ait.) Woodv. & Wood (fragrant).

Nymphaea odorata Ait.

Nymphaea odorata Ait., var. *minor* Sims.

White or Sweet-scented White Water Lily. Pond Lily.

Frequent or common. Ponds and still waters. June — Sept.

Introduced in many ponds for its showy and fragrant

flowers, which are often gathered and sold in market. The rhizome is medicinal.

Castalia tuberosa (Paine) Greene (bearing tubers).

Nymphaea reniformis of authors, not Walt.

White Pond or White Water Lily.

Rare. In deep water at Selden's Cove, Lyme (Graves & Bissell), and at Round Pond, Ridgefield (Eames). June — Aug.

NELUMBO Adans. Sacred Bean.

Nelumbo lutea (Willd.) Pers. (yellow).

Lotus. American or Yellow Nelumbo or Lotus. Great Water Lily. Duck Acorn. Water Chinquapin.

Very rare. In Selden's Cove, Lyme (D. C. Eaton in 1856, Graves, et al.). July — Aug.

BRASENIA Schreb. Water Shield.

Brasenia Schreberi Gmel.

Brasenia peltata Pursh.

Brasenia purpurea Casp.

Water Shield or Target. Little Water Lily. Waterleaf.

Ponds, slow streams and ditches. Frequent near the coast in New London County, occasional or rare elsewhere. Late June — Aug.

RANUNCULACEAE. CROWFOOT FAMILY.

RANUNCULUS L. Crowfoot. Buttercup.

Ranunculus circinatus Sibth. (coiled).

Batrachium divaricatum of authors, not *Ranunculus divaricatus* Schrank.

Batrachium longirostre of Britton's Manual.

Stiff or White Water Crowfoot.

Local. Salisbury, plentiful at Lakeville in a pond and in a stream flowing from it (M. L. Fernald, J. R. Churchill & Bissell). May — Aug.

Ranunculus aquatilis L. (aquatic), var. *capillaceus* DC. (hair-like).

Ranunculus aquatilis L., var. *trichophyllus* Gray.

Batrachium trichophyllum Bosch.

Batrachium flaccidum Rupr.

Batrachium Drouetii Nym.

Batrachium confervoides of authors, not Fries.

Common White Water Crowfoot. Water Milfoil. Green Eel Grass.

Occasional or frequent. Ponds and slow streams. Mid-May — Aug.

Ranunculus Cymbalaria Pursh (like *Cymbalaria*, a genus of the Figwort family).

Oxygraphis Cymbalaria Prantl.

Seaside Crowfoot.

Rare. Muddy shores: coves of the Thames River in Waterford and Montville (Graves), Bridgeport (H. C. Beardslee), Partridge Island (G. W. Hawes). July — Aug.

Ranunculus delphinifolius Torr. (having leaves like the Larkspur).

Ranunculus multifidus Pursh, not Forskål.

Yellow Water Crowfoot.

Rare or local. Ponds and pools. May — June.

The var. **TERRESTRIS** (Gray) Farwell (terrestrial) is sometimes found, especially in dry seasons. It seems to be the form taken by the species when rooting out of water, or when left in the mud of drying ponds.

Ranunculus laxicaulis (Torr. & Gray) Darby (loose-stemmed).

Ranunculus ambigens Wats.

Ranunculus obtusiusculus Raf.

Spearwort. Water Plantain Spearwort.

Occasional. Ditches, wet places and shallow water. June — Aug.

Ranunculus Flammula L. (a little flame), var. **reptans** (L.) Meyer (creeping).

Ranunculus reptans L.

Creeping or Crawling Spearwort.

Rare. Wet sandy or rocky shores: Waterford and Sprague (Graves), Preston (W. A. Setchell), Wethersfield (C. Wright), Windsor (Bissell). June — Aug.

Ranunculus sceleratus L. (cursed).

Cursed, Marsh, Ditch, or Biting Crowfoot. Water Celery. Blisterwort.

Swamps, ditches and wet places. Along the Connecticut River in East Hartford, rare (Weatherby, A. W. Driggs), and Middletown, occasional (A. W. Driggs); along the coast in Guilford (Bissell), and East Haven, rare (Harger); occasional westward, especially about the junction of salt marshes and upland. Mid-May — June.

One of our most acrid species and known to be poisonous to stock.

Ranunculus micranthus Nutt. (small-flowered).

Ranunculus abortivus L., var. *micranthus* Gray.

Rock Crowfoot.

Dry rocky woods. Occasional in the southeastern part of the state and along the tops of the trap hills in the Connecticut Valley; rare elsewhere: Oxford and Seymour (Harger), Darien (Harger, Eames & Weatherby). May.

Ranunculus abortivus L. (abortive).

Small-flowered, Kidney-leaved or Smooth Crowfoot.

Common. Rich, usually moist woods, thickets and more open places. Mid-April — July.

Ranunculus abortivus L., var. *eucylus* Fernald (well-rounded).

Rare. Moist rich woods: Sprague (Graves), Southington (Andrews), Oxford (Harger), Brookfield (Eames), Cornwall and Salisbury (Bissell). May — June.

Ranunculus allegheniensis Britton.

Mountain Crowfoot.

Rare. Rich woods: Monroe and Cornwall (Harger), Salisbury (M. L. Fernald & Bissell). May — June.

Ranunculus recurvatus Poir. (bent backward).

Hooked, Rough or Sanicle-leaved Crowfoot.

Frequent or common. Moist rich woods and more open places. May — June.

Ranunculus fascicularis Muhl. (clustered).

Early or Tufted Buttercup or Crowfoot.

Rare. Dry woods and more open places: Franklin (R. W. Woodward), New Haven (D. C. Eaton, G. W. Hawes), Granby (I. Holcomb), Southbury (Harger), Woodbury (Eames & C. C. Godfrey), Brookfield (Eames), Salisbury (Mrs. C. S. Phelps). April — May.

Generally confused with *Ranunculus hispidus*.

Ranunculus septentrionalis Poir. (northern).

Swamp or Marsh Buttercup or Crowfoot.

Wet meadows, swamps, ditches and along streams. Locally plentiful in Franklin and Lyme (Graves), but not otherwise reported from the southeastern part of the state; elsewhere well distributed and frequent or common. Mid-May — June.

Ranunculus hispidus Michx. (rough-haired).

Wood or Early Buttercup or Crowfoot.

Dry or moist often rocky woods. Occasional in the northern part of the state, extending southward as far as Franklin (R. W. Woodward), Middletown (M. Hitchcock), Berlin (Andrews), Oxford (Harger), Darien (Miss A. E. Carpenter). Late April — mid-June.

Ranunculus repens L. (creeping).

Creeping or Spotted-leaf Buttercup or Crowfoot.

Lawns and waste places in New London County, occasional (Graves); Hartford, rare, and Stamford, roadside (A. W. Driggs); New Hartford, bank of Farmington River, and Norfolk, wet woods (Bissell); Fairfield, moist grassy roadsides and wastes (Eames); Salisbury, along a woodland brook (Mrs. C. S. Phelps & Bissell). May — July. In part naturalized from Europe.

The double-flowered form of the gardens has escaped to wet fields in Salisbury (Mrs. C. S. Phelps & Bissell).

Ranunculus pennsylvanicus L.f.

Bristly Buttercup or Crowfoot.

Rare or local. Open wet or swampy places and muddy or sandy shores: Lyme, at Selden's Cove (Graves), East Hartford (Weatherby), Enfield and Granby (A. W. Driggs), Hamden (Bissell, Andrews), Oxford (Harger), Canaan (J.

H. Barbour), Sharon (Bissell), Salisbury (Mrs. C. S. Phelps).
June — Aug.

Ranunculus bulbosus L. (bulbous).

Bulbous Buttercup or Crowfoot. Butter or Blister Flowers.
Gold-cups. King-cups.

Common. Fields, pastures and roadsides, usually in dry ground. Mid-May — July. Naturalized from Europe.

A weed of the same character as *Ranunculus acris*, and, like that and some other species of this genus, an acrid poison. The irritant properties are said to be dissipated in drying. Medicinal.

Ranunculus acris L. (acrid).

Buttercups. Tall or Meadow Buttercup or Crowfoot. Butter or Blister Flowers.

Frequent or common. Fields, meadows and roadsides, usually in moist soil. Mid-May — Nov. Naturalized from Europe.

The var. *STEVENI* (Andrz.) Lange, occurs occasionally.

A pernicious weed, especially in pastures, and avoided by grazing animals.

THALICTRUM L. Meadow Rue.

Thalictrum dioicum L. (dioecious).

Early Meadow Rue. Feathered Columbine. Quicksilver Weed.

Rocky hillsides in rich soil. Occasional or local near the coast; local, frequent or common elsewhere. Late April — May.

Thalictrum revolutum DC. (rolled back from the edge).

Thalictrum purpurascens of Gray's Manual ed. 6 in part.

Purple or Wax-leaved Meadow Rue.

Occasional northward in dry fields and on hillsides; frequent southward, especially near the coast, in copses, dry or moist fields and in meadows. June — July.

Thalictrum polygamum Muhl. (polygamous).

Common or Tall Meadow Rue.

Frequent or common. Low meadows, thickets and beside streams. Late June — Aug.

ANEMONELLA Spach.

Anemonella thalictroides (L.) Spach (like *Thalictrum*, the Meadow Rue).

Syndesmon thalictroides Hoffmg.

Rue Anemone. Wind-flower.

Dry to moist woods, banks and more open places. Rare near the coast in New London County; frequent or common elsewhere. April — May.

Easily cultivated and then often double-flowered.

HEPATICA Hill. Liverleaf. Hepatica.

Hepatica triloba Chaix (three-lobed).

Hepatica Hepatica Karst.

Hepatica. Liverleaf. Liverwort. Mayflower. Mouse-ears. Trefoil.

Rich, usually rocky woods. Rare near the coast, becoming occasional or frequent northward. March, rarely — mid-May.

Placed in a warm situation at any time during the winter, potted plants will bloom. Of native plants the Liverleaf is usually considered to be the earliest flower of spring, although in their range *Claytonia caroliniana* and *Cardamine purpurea* habitually precede it. The leaves are medicinal and are still occasionally used in domestic practice.

Hepatica acutiloba DC. (with pointed lobes).

Hepatica acuta Britton.

Hepatica. Liverleaf. Liverwort.

Rare. Rocky woods in rich soil: Torrington and Salisbury (Bissell), Cornwall (E. E. Brewster), Canaan (A. W. Driggs). Late March — mid-May.

Medicinal properties the same as those of *Hepatica triloba*.

ANEMONE L. Anemone.

Anemone cylindrica Gray (cylindrical).

Long-fruited Anemone.

Dry roadsides, banks and borders of woods. Rare on and near the coast: Groton (Graves), Norwich (Mrs. E. E. Rogers, Graves), Guilford (G. H. Bartlett), Bridgeport and

Easton (Eames). Becoming occasional northward and frequent in the northwestern part of the state. Mid-June — July.

An acrid poison with medicinal properties.

Anemone riparia Fernald (of river banks).

Rocky woods and on river banks. Oxford, along the Housatonic River (Harger), and occasional or local from Litchfield northward and westward (Bissell). June — July.

Anemone virginiana L.

Tall or Summer Anemone. Thimbleweed.

Frequent. Dry woods, partial shade and in fields. Mid-June — Aug.

Anemone canadensis L.

Anemone pennsylvanica L.

Round-leaved or Round-headed Anemone.

Moist thickets and banks. Rare over most of its range: East Haven (A. W. Evans), Southington, apparently introduced (Andrews), North Canaan and Cornwall (Bissell), Newtown (J. P. Cowles). Locally plentiful along the Housatonic River in Oxford, Monroe and Derby (H. C. Beardslee, Harger). Mid-May — June.

Anemone quinquefolia L. (five-leaved).

Anemone nemorosa of Gray's Manual ed. 6, not L.

Wind-flower. Wood or Spring Anemone. Mayflower. Snow-drop.

Common. Rich, usually moist, woods, thickets and more open places. April — May.

An acrid poison with medicinal properties.

CLEMATIS L. Virgin's Bower.

Clematis virginiana L.

Wild Clematis. Devil's Hair. Traveler's Joy. Love Vine.

Common. Moist thickets, hedge-rows and roadsides. July — Aug.; fruit Sept. — Nov.

An acrid poison, and when bruised actively irritant to the skin or eyes. The leaves and flowers are medicinal.

Clematis verticillaris DC. (whorled).

Atragene americana Sims.

Purple or Mountain Clematis or Virgin's Bower.

Dry rocky woods. Rare or local over most of its range: North Stonington and East Haddam (Graves), Guilford (G. H. Bartlett), Bolton (Weatherby), New Haven (D. C. Eaton, et al.), Oxford (Harger), Salisbury (Mrs. C. S. Phelps). Occasional about the trap hills of central Connecticut. May.

CALTHA L. Marsh Marigold.

***Caltha palustris* L.** (of marshes).

Marsh Marigold. Cowslips. Meadow Gowan. May-blobs. Water-blobs.

Common or local. Swamps, wet places and along brooks. Mid-April — May.

The young plants are much used as a pot-herb. It is handsome in cultivation, flourishing in rich moist soil.

TROLLIUS L. Globeflower.

***Trollius laxus* Salisb.** (loose).

American, Spreading, Wild or Swamp Globeflower.

Rare. Swampy woods and meadows: Cornwall (E. E. Brewster, 1879, and at the same locality, Bissell, 1903). April — May.

COPTIS Salisb. Goldthread.

***Coptis trifolia* (L.) Salisb.** (three-leaved).

Goldthread. Canker-root. Yellow-root. Mouth-root.

Swamps and wet woods, especially in sphagnum. Not reported near the coast west of New Haven; rare near the coast eastward, mostly in sphagnous cedar swamps or cold, swampy woods; occasional northward, becoming frequent in the northern part of the state. May — mid-June.

The roots have been much used as a bitter tonic and in the form of an infusion as an astringent wash.

NIGELLA L. Fennel Flower.

***Nigella sativa* L.** (sown).

Nutmeg Flower.

Rare. Bridgeport, in waste ground (Eames). July. Fugitive from Europe.

Sometimes cultivated for its seeds which, under the name of Black Cumin, are used for seasoning.

AQUILEGIA L. Columbine.***Aquilegia canadensis* L.**

Wild or Red Columbine. Honeysuckle. Meeting-houses.
Rock Lily. Bells.

Occasional, frequent or common. Open or shaded places,
usually in rocky ground. Late April—June.

The var. *FLAVIFLORA* (Tenney) Britton (yellow-flowered)
sometimes occurs.

***Aquilegia vulgaris* L. (common).**

Garden or European Columbine. Blue Bells. Cock's-foot.

Rare. Escaped from gardens to roadsides and waste places:
Lebanon (Graves), West Hartford (H. S. Clark & Bissell),
Oxford (Harger), Milford, Westport and Woodbury (Eames
& C. C. Godfrey), Norfolk (Weatherby). Mid-May—June.
Adventive from Europe.

The herb is medicinal.

DELPHINIUM L. Larkspur.***Delphinium Consolida* L. (classical name).**

Garden or Field Larkspur. Dolphin Flower. Lark-heel.
Knight's Spur.

Rare. Waste grounds: Windham (Bissell), Bridgeport
and Fairfield (Eames), Middlebury (Harger). July—Sept.
Fugitive or adventive from Europe.

The herb and seeds are medicinal. The leaves are believed
to be poisonous to stock.

***Delphinium Ajacis* L. (from Ajax, Greek legendary hero).**

Larkspur. Rocket Larkspur.

Rare. Escaped from gardens into waste land and fields:
New London (Graves), Bridgeport and Fairfield (Eames),
Weston (Eames & C. C. Godfrey). Mid-June—Aug. Ad-
ventive from Europe.

CIMICIFUGA L. Bugbane.***Cimicifuga racemosa* (L.) Nutt. (having racemes).**

Black or Rattle Cohosh or Snakeroot. Rattle-top. Squaw-
root.

Rich, often rocky woods. Norfolk, plentiful at one locality.

but probably introduced (Miss M. C. Seymour), Southington, rare or local (Andrews, Bissell), Oxford, common (Harger); and frequent throughout the southwestern part of the state (Eames). Late June—July.

The var. *DISSECTA* Gray (finely cut) occurs with the species at Stratford (Eames).

The rootstock is valued in medicine and is official. In cultivation forms a fine background for lower plants in somewhat shaded situations.

ACTAEA L. Baneberry. Cohosh.

Actaea rubra (Ait.) Willd. (red).

Actaea spicata L., var. *rubra* Ait.

Red Baneberry, Cohosh or Snakeroot. Red-beads. Coral-berry. Snake-berry.

Rich, often rocky woods. Rather rare near the coast; occasional elsewhere. May—mid-June; fruit July—Aug.

Worthy of cultivation in a wild garden or rockery. The rootstock and roots are medicinal.

Actaea alba (L.) Mill. (white).

White Baneberry, Cohosh or Snakeroot. White-beads. Necklace-weed.

Rich, often rocky woods. Occasional northward; frequent southward. Mid-May—mid-June; fruit Aug.—Sept.

The rootstock and roots are medicinal. Both this and the preceding species contain irritant principles and are poisonous to stock. The berries of both species are poisonous to mankind.

HYDRASTIS Ellis. Orange-root. Yellow Puccoon.

Hydrastis canadensis L.

Golden Seal. Yellow-root. Turmeric-root. Indian Turmeric or Paint.

Rare. Rocky woods in rich soil: Plainville (J. N. Bishop), Southington (Mrs. E. R. Newell). May.

The rhizome and roots possess valued medicinal properties and are official.

MAGNOLIACEAE. MAGNOLIA FAMILY.**LIRIODENDRON L. Tulip Tree.**

Liriodendron Tulipifera L. (tulip-bearing).

Tulip Tree. Tulip, Hickory or Yellow Poplar. Canoe-wood.

Saddle Tree. Whitewood.

Occasional, local or frequent. Rich woods and openings.
June.

One of our largest trees and remarkable for its tall columnar trunk. A beautiful tree for roadside and park planting, rarely attacked by insects. The wood is soft, brittle, easily worked, largely used for interior finish, cabinet work, wooden ware, etc. The inner bark is medicinal.

MENISPERMACEAE. MOONSEED FAMILY.**MENISPERMUM L. Moonseed.**

Menispermum canadense. L.

Moonseed. Yellow Parilla or Sarsaparilla.

River banks and dry rocky hillsides, in woods or partial shade. Reported only from the western half of the state; occasional near the coast and on trap hills; rare elsewhere. June — early July; fruit Sept.—Oct., or persisting through the winter.

The roots are medicinal and were formerly official. Sometimes cultivated.

BERBERIDACEAE. BARBERRY FAMILY.**PODOPHYLLUM L. May Apple. Mandrake.**

Podophyllum peltatum L. (peltate).

Mandrake. May, Indian, Hog or Devil's Apple. Duck's-foot.

Wild Lemon. Raccoon-berry.

Rare. Roadsides and rich woods, nearly throughout, usually as an escape from cultivation. Mid-May — early June; fruit July — Aug.

The fruit is edible and harmless but disagreeable to many persons. The underground portion is medicinal and official and is the source of podophyllin. It is a desirable plant to grow in colonies for spring effects in the wild garden.

CAULOPHYLLUM Michx. Blue Cohosh.

Caulophyllum thalictroides (L.) Michx. (like *Thalictrum*, the Meadow Rue).

Pappoose Root. Squaw-root. Blue Cohosh. Blueberry Root. Blueberry.

Rich rocky woods, especially in moist situations; sometimes in low wooded swamps and openings along the coast. Rare near the coast eastward; occasional or local elsewhere. May; fruit Aug.—Oct., and sparingly persistent through the winter.

The rhizome and roots are of some value medicinally and were formerly officinal.

BERBERIS L. Barberry.

Berberis vulgaris L. (common).

Common Barberry. European Barberry. Pepperidge Bush.

Roadsides, fence-rows and pastures. Frequent or locally common southward, especially near the coast; occasional elsewhere. May—June; fruit Sept.—Oct., partly persistent through the winter. Naturalized from Europe.

The acid fruit is used to make a refreshing drink and for preserving. The bark has medicinal properties and has acquired local reputation as a spring medicine. Its beauty and other desirable qualities make it worthy of cultivation, especially as a hedge-plant.

LAURACEAE. LAUREL FAMILY.**SASSAFRAS** Nees.

Sassafras variifolium (Salisb.) Kuntze (various-leaved).

Sassafras officinale Nees & Eberm.

Sassafras Sassafras Karst.

Sassafras. Saxifrax. Cinnamon-wood. Ague Tree.

Frequent. Dry or moist woods, thickets and fence-rows, and on rocky hillsides. May—mid-June; fruit Sept.

The wood is aromatic, rather soft and brittle, but durable in contact with the soil. The root-bark is medicinal and is used as an ingredient of root beer. It furnishes a volatile oil of agreeable odor and taste, used for flavoring candy, soap,

etc., and as an ingredient of liniments. The bark of the root, the pith and the volatile oil are officinal. The leaves are sometimes chewed to allay thirst.

BENZOIN Fabric. Wild Allspice. Fever Bush.

Benzoin aestivale (L.) Nees (of summer).

Lindera Benzoin Blume.

Benzoin Benzoin Coulter.

Spice, Benjamin or Fever Bush. Wild Allspice. Spice-wood. Snapwood.

Common. Wet woods and thickets. Mid-April — mid-May; fruit Sept.— Oct.

The fragrant bark and the berries are occasionally used medicinally.

PAPAVERACEAE. POPPY FAMILY.

ESCHSCHOLTZIA Cham.

Eschscholtzia californica Cham.

California Poppy.

Rare. Fairfield, a waif in waste ground (Eames). July. Fugitive from the Pacific Coast.

SANGUINARIA L. Bloodroot.

Sanguinaria canadensis L.

Bloodroot. Red or White Puccoon. Red Indian Paint. Red-root.

Rich woods and shaded places, especially in rocky situations. Rare or local near the coast; local, frequent or common elsewhere. April — mid-May.

Flowers sometimes pink. The rootstock is employed in medicine and is officinal.

CHELIDONIUM L. Celandine.

Chelidonium majus L. (greater).

Celandine. Swallow-wort. Tetter-wort. Kill-wart.

Occasional or frequent. Fence-rows, roadsides, crevices of walls and rocky places and waste ground about dwellings, especially in shade. May — June. Naturalized from Europe.

The plant is actively poisonous to stock; is also medicinal, until recently officinal.

PAPAVER L. Poppy.***Papaver somniferum* L. (sleep-bringing).**

Garden or Opium Poppy. Common Poppy.

Rare. Waste ground as an escape from cultivation: Bridgeport (Eames). July. Adventive from the Old World.

Medicinal and extensively cultivated in the East as the source of opium.

***Papaver Rhoeas* L. (classical name for this species).**

Red, Field or Corn Poppy. Corn, Canker or African Rose. Headache.

Rare. Grassland, grain fields and roadsides: Southington (Andrews, Bissell), Stratford (Miss A. E. Carpenter, Eames), Fairfield (Eames). June — mid-July. Fugitive from Europe.

The "Shirley," one of the handsomest of poppies in cultivation, is a form of this species. Known to be poisonous to stock.

***Papaver dubium* L. (doubtful).**

Field or Smooth-fruited Poppy.

Rare. Waste ground: Fairfield (Eames), Westport (R. Thaxter, Miss A. E. Carpenter). May. Adventive from Europe.

ARGEMONE L. Prickly Poppy.***Argemone alba* Lestib. (white).**

White Prickly Poppy.

Rare. East Lyme, one plant in newly seeded grassland (Miss A. M. Ryon). June — July. Fugitive from the southwest.

***Argemone mexicana* L.**

Mexican or Prickly Poppy. Flowering or Yellow Thistle. Devil's Fig. Bird-in-the-Bush.

Rare. Roadside in New Haven (D. C. Eaton). July — Aug. Fugitive from tropical America.

FUMARIACEAE. FUMITORY FAMILY.**ADLUMIA Raf. Climbing Fumitory.*****Adlumia fungosa* (Ait.) Greene (spongy).**

Adlumia cirrhosa Raf.

Mountain or Wood Fringe. Alleghany or Canary Vine. Fairy Creeper.

Rocky hillsides, especially in shaded places or in woods. Rare in the eastern half of the state and near the coast westward: Waterford (Graves), Guilford (G. H. Bartlett), New Haven (J. A. Allen), Weston (Miss E. L. Smith). Local or occasional northward in the western half of our area. July — Sept.

A highly ornamental plant and occasionally cultivated.

DICENTRA Bernh.

Dicentra Cucullaria (L.) Bernh. (hood-like).

Bicuculla Cucullaria Millsp.

Dutchman's, Kitten or Little-boy's Breeches. White Ear-drops or Hearts. Soldier's Cap. Boys-and-Girls.

Rocky woods in rich soil. Rare in the southeastern part of the state: Franklin (Graves). Local, occasional or frequent elsewhere. April — mid-May.

Dicentra canadensis (Goldie) Walp.

Bicuculla canadensis Millsp.

Squirrel or Turkey Corn. Girls-and-Boys.

Rare or local. Moist rich soil of woodland hillsides among rocks: Bozrah (Mrs. E. E. Rogers), Plainville (J. N. Bishop), Torrington (Bissell). April — mid-May.

The tubers are medicinal.

CORYDALIS Medic.

Corydalis sempervirens (L.) Pers. (evergreen).

Corydalis glauca Pursh.

Capnoides sempervirens Borkh.

Pale or Pink Corydalis.

Occasional. Thin soil and crevices of dry exposed ledges, and in recent clearings. Mid-May — Oct.

FUMARIA L. Fumitory.

Fumaria officinalis L. (of the shops).

Common or Hedge Fumitory. Modesty.

Rare. Escaped from cultivation to waste places, roadsides and about old gardens: New Haven (D. C. Eaton), Southington (Andrews), Waterbury (A. E. Blewitt), Oxford (Harger), Fairfield and Newtown (Eames), Stamford (W. H. Hoyt). Mid-May — Sept. Adventive from Europe.

Formerly, and rarely even now, cultivated for its reputed medicinal properties.

CRUCIFERAE. MUSTARD FAMILY.

DRABA L.

Draba verna L. (of spring; vernal).

Whitlow or Vernal Whitlow Grass. Shad-flower.

Dry roadsides, fields and cultivated ground. Rare in northern districts: East Hartford (J. O. Goodwin), Hartford (A. W. Driggs). Occasional throughout the southern part of the state. April — May. Naturalized from Europe.

Formerly possessed some reputation for the cure of whitlow.

Draba caroliniana Walt.

Whitlow Grass.

Rare. Dry sterile soil: Montville and Norwich (W. A. Setchell), Waterford (Graves), East Haven (E. B. Wilson), Oxford (Harger), Kent (H. Mosher). Mid-April — May.

BERTEROA DC.

Berteroa incana (L.) DC. (hoary).

Hoary Alyssum.

Rare or local. Waste places and fields: Norwich (Mrs. E. E. Rogers), Putnam (Harger), Guilford (G. H. Bartlett), East Windsor (Bissell), Plainville (J. N. Bishop), Southington (Andrews, Bissell), Naugatuck (A. E. Blewitt), Bridgeport and Westport (Eames), Wilton (Miss A. E. Carpenter). June — Aug. Adventive from Europe.

LOBULARIA Desv. Sweet Alyssum.

Lobularia maritima (L.) Desv. (of the seaside).

Alyssum maritimum Lam.

Koniga maritima R. Br.

Sweet Alyssum. Sweet Allison. Madwort. Snowdrift.

Rare. Escaped from cultivation to roadsides and waste places: East Hartford (Weatherby), Southington (Andrews), Bridgeport (Eames). July — Nov. Fugitive from Europe.

U of M

ALYSSUM L.**Alyssum alyssoides** L. (like Alyssum).*Alyssum calycinum* L.

Small Alyssum.

Rare. Roadsides and wastes in dry ground: Branford (T. M. Prudden), East Haven (Eames), New Haven (Harger), Southington (Andrews, Bissell). May—June. Fugitive or adventive from Europe.

Alyssum saxatile L. (growing among rocks).

Golden-tuft.

Rare. Griswold, escaped from a garden to field (E. F. Burleson). June—July. Native of Europe.

THLASPI L. Penny Cress.**Thlaspi arvense** L. (of cultivated land).

Field Penny or Bastard Cress. Dish, Treacle or Mithridate Mustard.

Rare. Waste places: Norwich (Mrs. E. E. Rogers), East Hartford (Weatherby), Southington and Plainville (Bissell), Waterbury (J. M. Richardson, A. E. Blewitt), Naugatuck (A. E. Blewitt), Bridgeport (J. Otis), New Milford (E. H. Austin). May—June. Fugitive or adventive from Europe.

LEPIDIDIUM L. Peppergrass. Pepperwort.**Lepidium virginicum** L.

Wild Peppergrass. Bird's Pepper. Tongue Grass.

Common. Dry roadsides, fields and waste grounds. June—Sept.

Lepidium apetalum Willd. (without petals).*Lepidium intermedium* of Gray's Manual, ed. 6.

Bird's Pepper. Tongue Grass. Wild Peppergrass.

Frequent or common. Fields and roadsides. June—Aug. Naturalized from Europe or the West.

Lepidium ruderales L. (growing among rubbish).

Roadside Peppergrass.

Rare. Bridgeport, in waste ground (Eames). June. Fugitive from Europe.

NOU

Lepidium sativum L. (sown).

Garden Cress. Garden or Golden Peppergrass. Poor Man's Pepper.

Rare. Southington, about an old garden (Andrews); Salisbury, in a poultry yard and probably introduced with grain (A. V. Osmun). June—July. Fugitive from Europe.

Sometimes cultivated as a salad plant.

Lepidium campestre (L.) R. Br. (of fields).

Field, Bastard or Cow Cress. Mithridate Mustard. Poor Man's Pepper.

Rare or occasional. Cultivated fields, sandy roadsides and waste places. June. Adventive from Europe.

IBERIS L.**Iberis amara L. (bitter).**

Candytuft. Bitter or Annual Candytuft. Clown's Mustard.

Rare. Escaped from cultivation to waste places: Southington (Andrews), Bridgeport (Eames). July—Aug. Fugitive from Europe.

CAPSELLA Medic. Shepherd's Purse.**Capsella Bursa-pastoris (L.) Medic. (shepherd's pouch).**

Bursa Bursa-pastoris Britton.

Shepherd's Purse or Sprouts. Mother's Heart. Witches' Pouches.

Common. Cultivated ground, fields, roadsides and waste places. April—Oct. Naturalized from Europe.

Valued as a pot-herb because of its earliness. A bad weed in cultivated ground. Medicinal.

CAMELINA Crantz. False Flax.**Camelina sativa (L.) Crantz (sown).**

False or Dutch Flax. Gold-of-Pleasure. Cheat. Myagrum.

Rare. Oxford, in grain fields (Harger). June—July. Fugitive from Europe.

This, like the following species, was formerly frequent among flax, of which it was believed to be a transmuted or degenerate form.

Camelina microcarpa Andr. (small-fruited).

Camelina silvestris Wallr.

False or Dutch Flax. Gold-of-Pleasure. Cheat. Myagrum.

Rare. Roadsides, grassland and grain fields: New London (Graves), Southington (Andrews), Waterbury and Naugatuck (A. E. Blewitt), Oxford (Harger), Fairfield (Eames), Litchfield (Miss E. H. Thompson, Bissell). May — July. Fugitive from Europe.

NESLIA Desv. Ball Mustard.**Neslia paniculata** (L.) Desv. (panicled).

Ball Mustard.

Rare. Waste ground: Bridgeport (Eames), Litchfield (Miss E. H. Thompson). June — July. Fugitive from Europe.

CAKILE Ludwig. Sea Rocket.**Cakile edentula** (Bigel.) Hook. (toothless).

Cakile americana Nutt.

American Sea Rocket. Sea Cole or Rocket.

Frequent or common on the shores of the Sound and of tidal rivers and creeks. Mid-June — Oct.

RAPHANUS L. Radish.**Raphanus Raphanistrum** L.

Wild Radish. Jointed or White Charlock or Chadlock. Charlock. Chadlock.

Occasional, frequent or common. Cultivated ground and waste places. June — Oct. Naturalized from Europe.

Sometimes very troublesome as a weed.

Raphanus sativus L. (sown).

Radish. Garden Radish.

Rare. Cultivated or waste ground: Southington (Bissell, Andrews), Bridgeport and Fairfield (Eames). June — Oct. Fugitive from Europe.

BRASSICA L. Mustard. Turnip.**Brassica alba** (L.) Boiss. (white).

Sinapis alba L.

White Mustard.

Rare or local. Waste places: Waterbury (A. E. Blewitt), Bridgeport, in several places and plentiful in one field (I. F. Moore, Eames). June — mid-Aug. Adventive from Europe.

The seeds are well known as a condiment and rubefacient, and are sometimes used to preserve cider in a sweet condition. Has been cultivated for at least 2000 years.

Brassica arvensis (L.) Kuntze (of cultivated ground).

Brassica Sinapistrum Boiss.

Charlock. Chadlock. Cadlock. Kedlock. Kerlock. Wild, Corn or Bastard Mustard. Field or Corn Kale.

Occasional or frequent. Waste or cultivated ground. June — July. Naturalized from Europe.

Sometimes a bad weed.

Brassica juncea (L.) Cosson (like *Juncus*, the Rush).

Indian or Chinese Mustard.

Cultivated fields and waste places. Frequent in the vicinity of the coast; occasional, local or rare elsewhere. June — Oct. Naturalized from Asia.

The seeds are used like those of White and Black Mustard, and the young leaves for greens. A bad weed in grain fields where it occurs.

Brassica japonica Siebold.

Curled or Pot-herb Mustard. California Peppergrass.

Rare. Escaped from cultivation in garden soil at Southington (Andrews). June — Sept. Fugitive from Asia.

The soft, thin leaves make excellent "greens."

Brassica nigra (L.) Koch (black).

Black Mustard. Cadlock. Kedlock. Kerlock.

Occasional or frequent. Waste ground and roadsides. June — Sept. Naturalized from Europe.

The young plants are sometimes used as a pot-herb. The seeds are well known as a condiment and rubefacient and are officinal.

Brassica campestris L. (of fields).

Rutabaga.

Occasional. Cultivated ground and waste places. Mid-May — July. Adventive from Europe.

Sometimes a bad weed. Extensively cultivated for its roots.

Brassica Napus L. (classical name).

Rape.

Rare. Fields and waste ground. June—July. Fugitive from Europe.

Sometimes sown for forage.

Brassica Rapa L. (classical name).

Turnip.

Occasional. Waste places and cultivated ground. June—July. Fugitive from Europe.

Extensively cultivated as a vegetable.

Brassica oleracea L. (suitable for a pot-herb).

Cabbage.

Rare. Cultivated on waste ground as an escape from cultivation. June. Fugitive from Europe.

Well known as a vegetable.

DIPLLOTAXIS DC.

Diplotaxis muralis (L.) DC. (of walls).

Sand Rocket or Mustard.

Rare. Cultivated on waste ground: Southington (Andrews & Bissell), Oxford (Harger), Stamford (W. H. Hoyt). June—Sept. Fugitive from Europe.

Diplotaxis tenuifolia (L.) DC. (slender-leaved).

Wall Rocket or Mustard.

Local. Plentiful in a sandy waste in Bridgeport (Eames), and about chalk piles in Stamford (W. H. Hoyt). July—Sept. Naturalized from Europe.

CONRINGIA Adans. Hare's-ear Mustard.

Conringia orientalis (L.) Dumort. (of the Orient).

Hare's-ear.

Rare. Waste places: Fairfield (Eames), New Milford (E. H. Austin). June. Fugitive from the Northwest or from Europe.

ALLIARIA Adans. Garlic Mustard.

Alliaria officinalis Andrz. (of the shops).

Alliaria Alliaria Britton.

Sisymbrium Alliaria Scop.

Hedge Garlic.

Rare. Waste ground: Chester (Mrs. S. I. Smith), Naugatuck (A. E. Blewitt), Westport (Harger). May—June. Fugitive from Europe.

SISYMBRIUM L. Hedge Mustard.

Sisymbrium officinale (L.) Scop. (of the shops).

Bank Cress.

Local. Fairfield, where it is plentiful in one locality in waste ground (Eames). Mid-May—Oct. Adventive from Europe.

Sisymbrium officinale (L.) Scop., var. *leiocarpum* DC. (smooth-fruited).

Sisymbrium officinale of Manuals.

Bank Cress.

Common. Fields, roadsides and waste places. Mid-May—Oct. Naturalized from Europe.

Sisymbrium Loeselii L.

Rare. In mill waste at Naugatuck (B. B. Bristol), New Milford (Harger & Blewitt). July. Adventive from Europe.

Sisymbrium altissimum L. (tallest).

Tumble Mustard.

Rare or occasional. Waste places about roadsides and along railroads. June—Aug. Adventive from Europe or the West.

Sisymbrium canescens Nutt. (growing hoary).

Sophia pinnata Howell.

Tansy Mustard. Hoary Hedge Mustard.

Rare. Waste ground: Clinton (J. H. Sperry, 1884). May. Fugitive from the South.

Sisymbrium Sophia L.

Sophia Sophia Britton.

Meadows, waste places and along streams, usually in moist soil. Frequent or common except in the southeastern part of the state where it is rare. May—June. Naturalized from Europe.

Sometimes used as a salad plant.

Barbarea stricta Andrz. (straight and upright).

Barbarea vulgaris R.Br., var. *stricta* Gray.

Winter Cress.

Occasional or frequent. Roadsides, waste places, fields and along streams. May—June.

Barbarea verna (Mill.) Asch. (of spring).

Barbarea praecox Sm.

Early Winter or Belle Isle Cress. Scurvy Grass.

Rare. Cultivated fields, waste places and roadsides: Waterford (Graves), New Haven and Oxford (Harger), Milford, Stratford, Bridgeport and Fairfield (Eames). May—mid-June. Adventive from Europe.

IODANTHUS Torr. & Gray.

Iodanthus pinnatifidus (Michx.) Steud. (feather-cleft).

Thelypodium pinnatifidum Wats.

Purple Rocket.

Rare. Middletown, border of pond (M. Hitchcock, 1879). June. Fugitive from the West.

LUNARIA L. Moonwort.

Lunaria annua L. (annual).

Honesty. Satin-flower. Moonwort. Money-plant.

Rare. Westport, at Green's Farms, in a dooryard but apparently self-sown (C. L. Pollard). Aug. Fugitive from Europe.

Sometimes cultivated for winter bouquets.

DENTARIA L. Toothwort. Pepper-root.

Dentaria diphylla Michx. (two-leaved).

Pepper-root. Crinkle-root. Tooth-root. Toothwort.

Rich, moist, wet or springy woods, banks and more open

places. Occasional or local except near the coast in the southeastern part of the state where it has not been reported. Late April — late May.

The fresh rootstocks are sometimes eaten as a relish.

Dentaria maxima Nutt. (greatest).

Large Pepper-root or Toothwort.

Rare. Windsor, plentiful in rich soil on banks and alluvial bottoms beside a woodland stream (Eames). Late April — mid-May.

Dentaria incisifolia Eames (cut-leaved).

Dentaria incisa Eames, not Small.

Rare. Rich, damp, hillside woods near the Housatonic River in Sherman (E. H. Austin & Eames). Late April — mid-May.

Dentaria laciniata Muhl. (slashed).

Cut-leaved Pepper-root or Toothwort.

Rare or local. Moist to rather dry soil of rich woods and more or less shaded banks, throughout, but especially rare in the southeastern part of the state: Norwich (Mrs. E. E. Rogers), Old Lyme (Bissell). Mid-April — early May.

Dentaria anomala Eames (anomalous).

Rare. Moist, rich woods and banks: Plainville (Bissell), Orange (Harger). Late April — early May.

This species occurs at stations where *Dentaria diphylla* and *Dentaria laciniata* grow together, and is possibly a hybrid.

CARDAMINE L. Bitter Cress.

Cardamine bulbosa (Schreb.) BSP. (bulbous).

Cardamine rhomboidea DC.

Spring or Bitter Cress.

Wet woods and meadows. Rare near the coast in the southeastern part of the state; occasional elsewhere. Mid-May — mid-June.

Cardamine Douglassii (Torr.) Britton.

Cardamine rhomboidea DC., var. *purpurea* Torr.

Cardamine purpurea Britton.

Cardamine bulbosa BSP., var. *purpurea* BSP.

Spring or Purple Cress.

Springy places and swamps in woods or shaded situations. Rare at Newtown (I. P. Blackman, J. Pettibone); locally plentiful in New Milford, Sherman and Kent (E. H. Austin & Eames); many plants at one locality in North Canaan (Bissell). Late March — early May.

***Cardamine pratensis* L. (of meadows).**

Cuckoo Flower. Ladies' Smock.

Rare. Bristol, about a garden but formerly plentiful in a meadow (W. A. Terry), Litchfield, in a lawn (Miss E. H. Thompson), Norfolk (Miss M. C. Seymour), Salisbury, margin of a lake and small stream (Mrs. C. S. Phelps). May. At least in part adventive from farther north.

***Cardamine parviflora* L. (small-flowered).**

Cardamine hirsuta L., var. *sylvatica* of some American authors.

Cardamine arenicola Britton.

Small Bitter Cress.

Occasional or local. Ledges, woods or open situations in barren or sterile ground. Mid-April — June.

***Cardamine pennsylvanica* Muhl.**

Cardamine hirsuta of Gray's Manual ed. 6 in great part.

Bitter Cress. Brook, Land or Lamb's Cress.

Frequent. About springs, along brooks and in wet shaded places. May — June.

Sometimes used as a salad plant and to some extent gathered for market.

ARABIS L. Rock Cress.

***Arabis lyrata* L. (lyre-shaped).**

Low Rock Cress. Wall Cress.

Rocks, ledges, banks and sandy places, in dry ground. Occasional in most districts but not reported from the southeastern part of the state. May — June.

***Arabis glabra* (L.) Bernh. (smooth).**

Arabis perfoliata Lam.

Tower Mustard or Cress.

Rare. Fields and meadows: Norwich (W. A. Setchell), Windsor (A. W. Driggs), Farmington (Andrews & Bissell, Weatherby), Southbury and New Milford (Harger), Bridgeport (Eames). June.

***Arabis Drummondi* Gray.**

Arabis confinis Wats., in great part.

Rare. Dry wooded hillsides: Montville, Franklin, Ledyard and Old Lyme (Graves), Lisbon (Harger), Branford (A. L. Winton), West Hartford and Bloomfield (A. W. Driggs), Canaan (C. K. Averill). May—July.

***Arabis hirsuta* (L.) Scop. (hairy).**

Hairy Rock Cress. Wall Cress.

Rare. Rocky open woods and sandy ground: Old Lyme (Graves), Bolton (A. W. Driggs), Oxford (Harger), Canaan (C. K. Averill), Salisbury (Mrs. C. S. Phelps). Mid-May—early June.

***Arabis laevigata* (Muhl.) Poir. (smoothed).**

Smooth Rock Cress. Wall Cress.

Rocky woods and more open places. Rare in the southeastern part of the state: Norwich (Mrs. E. E. Rogers), Franklin (Graves). Occasional or frequent elsewhere. Mid-April—May.

***Arabis canadensis* L.**

Sickle-pod. Turkey-pod.

Occasional. Dry, rich, rocky and rather open woods. June—Aug.

CAPPARIDACEAE. CAPER FAMILY.

POLANISIA Raf.

***Polanisia graveolens* Raf. (strong-smelling).**

False Mustard. Clammy-weed.

Rare. Gravelly and sandy shores of the Hockanum River at East Hartford (Weatherby), and of the Connecticut River at Hartford (A. W. Driggs). July—Aug.

***Polanisia trachysperma* Torr. & Gray (rough-seeded).**

Rare. Alluvial soil, Glastonbury (Mrs. F. W. Starmer),

gravelly and sandy margin of brook, Salisbury (Mrs. C. S. Phelps & Weatherby), Sharon (H. S. Clark). Aug.—Sept. Probably introduced from the West.

CLEOME L.

Cleome spinosa L. (prickly).

Spider-flower. Prickly Cleome.

Rare. Escaped from cultivation to waste grounds: Bridgeport and Fairfield (Eames), Norwalk (G. P. Ells). July—Sept. Fugitive from tropical America.

RESEDACEAE. MIGNONETTE FAMILY.

RESEDA L. Mignonette. Dyer's Rocket.

Reseda Luteola L. (yellowish).

Dyer's Weed, Weld, or Rocket. Yellow-weed.

Rare. Roadsides and waste places: Guilford (W. R. Dudley), New Haven (O. Harger), Monroe (H. C. Beardslee). June—July. Fugitive from Europe.

Reseda lutea L. (yellow).

Crambling Rocket.

Rare. Roadsides, fields and waste places: Preston (E. F. Burleson), East Windsor (Bissell), Bridgeport (Eames), North Canaan (M. B. Toby, Bissell), Salisbury (Mrs. C. S. Phelps, A. V. Osmun). May—June. Adventive from Europe.

Reseda odorata L. (fragrant).

Common or Garden Mignonette.

Rare. Waste ground in Southington (Andrews), and Fairfield (Eames). July—Aug. Fugitive from North Africa.

Reseda alba L. (white).

White or Upright Mignonette.

Rare. Escaped from cultivation to waste ground in Waterbury (A. E. Blewitt), and Bridgeport (Eames). July—Sept. Fugitive from Europe.

SARRACENIACEAE. PITCHER-PLANT FAMILY.

SARRACENIA L.

Sarracenia purpurea L. (purple).

Side-saddle Flower. Pitcher-plant. Huntsman's, Adam's,
Indian or Water Cup. Indian Pitcher. Dumb Watches.

Occasional, local or frequent. Sphagnum bogs or some-
times in wet meadows. Late May—June.

The root and leaves are medicinal.

DROSERACEAE. SUNDEW FAMILY.

DROSERA L. Sundew.

Drosera rotundifolia L. (round-leaved).

Round-leaved Sundew. Dew-plant.

Occasional or frequent. Bogs, wet meadows and sandy
swamps, especially in sphagnum. July—mid-Aug.

The plant is medicinal.

Drosera longifolia L. (long-leaved).

Drosera intermedia Hayne.

Drosera intermedia Hayne, var. *americana* DC.

Long-leaved Sundew. Dew-plant.

Rare, local or occasional. Sphagnum bogs and swamps.
Late June—Aug.

PODOSTEMACEAE. RIVER WEED FAMILY.

PODOSTEMUM Michx. River Weed.

Podostemum ceratophyllum Michx. (horny-leaved).

River Weed. Thread-foot.

On rocks, stones and gravel in shallow running water.
Rare in most districts: Shetucket River in Sprague and
Franklin (Graves), Killingworth (F. W. Hall), Hartford
(D. C. Eaton), Windsor (Harger). Occasional in Oxford
(Harger), Newtown (Eames), and throughout the south-
western part of the state. Mid-June—Aug.; fruit July—Sept.

CRASSULACEAE. ORPINE FAMILY.

PENTHORUM L. Ditch Stonecrop.**Penthorum sedoides** L. (like *Sedum*, the Stonecrop).

Ditch or Virginia Stonecrop.

Frequent. Ditches, wet places and on muddy shores. July
— Aug.

The plant is medicinal.

TILLAEA L.**Tillaea aquatica** L. (aquatic).*Tillaea simplex* Nutt.

Pygmy Weed.

Rare or local. On tidal mud of rivers and creeks: New Haven, plentiful about the upper reaches of tidewater in Mill River, and Milford, sparingly along Beaver Creek (Eames). Mid-June — July.

SEDUM L. Stonecrop. Orpine.**Sedum acre** L. (acid or biting).

Mossy or Biting Stonecrop. Golden Moss or Chain.

Local. Escaped from cultivation to roadsides, banks, rocky places and walls in all quarters of the state and plentiful at some stations. Mid-June — July. Naturalized from Europe.

Sedum ternatum Michx. (in threes; referring to the arrangement of the leaves).

Wild Stonecrop.

Rare. Escaped from gardens to roadsides and waste places: Guilford (W. H. Rowland), East Haddam (Weatherby), Windsor (Bissell), Cheshire and Oxford (Harger), Norfolk (Miss M. C. Seymour), Kent and New Milford (Eames & E. H. Austin), Milford (Eames), Stamford (W. H. Hoyt). May. At least in part adventive from the South.

Sedum triphyllum (Haw.) S. F. Gray (three-leaved).*Sedum purpureum* Gray's Manual ed. 7.*Sedum Telephium* Gray's Manual ed. 6, not L.

Orpine. Garden Orpine. Live-forever. Live-long. Aaron's Rod. Bag-leaves. Witches' Money-bags. Life-of-Man.

Frequent. Dry or moist roadsides, fields, thickets and about old dwellings. Aug.—Sept. Naturalized from Europe. Rarely seen in flower.

SEMPERVIVUM L. Houseleek.

Sempervivum tectorum L. (of dwellings).

Houseleek. Hen-and-chickens.

Rare. Milford, long persistent and spreading from former cultivation (Eames). July—Aug. Introduced from Europe.

SAXIFRAGACEAE. SAXIFRAGE FAMILY.

SAXIFRAGA L. Saxifrage.

Saxifraga pennsylvanica L.

Swamp Saxifrage.

Swamps and wet meadows. Rare near the coast, occasional or frequent elsewhere. May—June.

The form with crimson petals has been collected at New Milford by Miss S. R. Armington.

Saxifraga virginicensis Michx.

Saxifrage. Early or Spring Saxifrage. Mayflower.

Frequent or common. Ledges, banks and in rocky woods. April—early June.

A form with double flowers occurs at Kent (H. Mosher).

TIARELLA L. False Miterwort.

Tiarella cordifolia L. (having heart-shaped leaves).

Foam-flower. False Miterwort. Coolwort.

Rich, wet and often rocky woods. Rare or local in most districts: North Branford (F. W. Hall), New Haven (D. C. Eaton), Bridgeport (Eames), Torrington (Mrs. C. S. Phelps), Kent (C. K. Averill). Frequent in Granby and northern Litchfield County. May—mid-June.

A beautiful plant well worthy of cultivation. Herb medicinal.

HEUCHERA L. Alum Root.

Heuchera americana L.

Common Alum Root. American Sanicle.

Woods, banks and fence-rows. Occasional in the Housatonic Valley in Litchfield County, and frequent or locally common in the southwestern part of the state, extending eastward as far as New Haven (D. C. Eaton), Hamden (J. S. Smith), Plainville (J. N. Bishop). Late May — early July.

The roots are very astringent and are of value medicinally.

MITELLA L. Miterwort. Bishop's Cap.

Mitella diphylla L. (two-leaved).

Miterwort. Bishop's Cap. Fringe or Fairy Cup.

Moist woods and shaded banks. Frequent or locally common northward in the western part of the state; rare in northeastern Connecticut and near the coast westward; not reported from New London County. Late April — May.

A good plant for cultivation in rocky shaded places.

Mitella prostrata Michx. (prostrate).

Rare. Moist rich woods: New Milford, one plant only (C. K. Averill & E. H. Austin). Late April — May.

Very little is known of *Mitella prostrata*. As this plant was found growing where *Mitella diphylla* is plentiful, it is probable that the specimen represents an aberrant form of that species, even though it is a good match for the type specimen of *Mitella prostrata*.

Mitella nuda L. (naked).

Rare. Wet mossy woods: Litchfield (W. Buell), Winchester and Salisbury, several localities (Mrs. C. S. Phelps). May — June.

CHRYSOSPLENIUM L. Golden Saxifrage.

Chrysosplenium americanum Schwein.

Water Carpet. Golden Saxifrage.

Frequent or common. Wet or swampy woods, springs and rills. Mid-March — June.

PARNASSIA L. Grass of Parnassus.

Parnassia caroliniana Michx.

Grass of Parnassus.

Bogs and wet meadows. Frequent or locally common ex-

cept in the southwestern part of the state, but not reported near the coast west of New Haven. Aug.—Sept.

Worthy of cultivation and may be grown in any sunny or partly shaded moist or wet situation. The plant is medicinal.

PHILADELPHUS L. Mock Orange. Syringa.

Philadelphus inodorus L. (without fragrance).

Large-flowered Syringa.

Rare. Escaped about an old nursery at Wethersfield (H. S. Clark & Bissell). June. Fugitive from the South.

Philadelphus coronarius L. (pertaining to a crown).

Syringa. Mock Orange. Orange-flower Tree.

Rare. Escaped from cultivation to roadsides and waste places: Bridgeport and Westport (Eames). June. Native of Europe.

Philadelphus pubescens Loisel. (downy).

Syringa.

Rare. Escaped from cultivation to pasture at Wethersfield (H. S. Clark & Bissell). June. Adventive from the South.

DEUTZIA Thunb.

Deutzia scabra Thunb. (rough).

Deutzia.

Rare. Wethersfield, escaped about an old nursery (H. S. Clark & Bissell), New London, brush lot near cemetery (Graves). June. Fugitive from Asia.

RIBES L. Currant. Gooseberry.

Ribes Cynosbati L. (classical name).

Prickly Gooseberry. Dogberry.

Rocky woods and thickets. Occasional in northern Litchfield County, extending southward as far as New Milford (Eames & E. H. Austin) and eastward to New Hartford (Bissell). It occurs also in Stafford and Tolland (A. W. Driggs). May; fruit July.

Ribes gracile Michx. (slender).

Ribes missouriense Nutt.

Missouri Gooseberry.

Rare. Roadside fence-row, Norwalk (Eames & C. C. Godfrey). May. Probably introduced from the West.

Ribes rotundifolium Michx. (round-leaved).

Wild Gooseberry.

Rare. Rocky woods: Meriden (W. H. Patton), Southington and Salisbury (Bissell). May—July.

Ribes oxycanthoides L. (Hawthorn-like).

Northern, Smooth or Wild Gooseberry.

Occasional. Rocky woods and thickets, roadsides and swamps. May.

Parent of some forms well known in cultivation.

Ribes Grossularia L. (*grossulus*, a small unripe fig).

Ribes Uva-crispa L.

Garden, Common or European Gooseberry. Teaberry.

Rare. Escaped from cultivation to roadsides, fence-rows and waste places: Stonington and Groton (Graves), Old Lyme (Bissell), Southington (Andrews & Bissell), Orange, Stratford and Fairfield (Eames), New Milford (Eames & E. H. Austin). Late April—May; fruit July. Native of Europe.

Cultivated in many kitchen gardens for its fruit, which is used for tarts and jam, or in its choicer varieties for its fine flavor uncooked.

Ribes americanum Mill.

Ribes floridum L'Hér.

Wild Black, Black or Flowering Currant. Quinsy-berry.

Occasional or frequent. Native in moist woods or thickets except in the southern part of the state, where it occurs as an escape from cultivation in fence-rows, roadsides and waste places. May—mid-June; fruit mid-July—Aug.

The fruit is edible but rather insipid.

Ribes nigrum L. (black).

Garden or European Black Currant.

Rare. Bethany, escaped from cultivation to waste ground (Eames). May—June. Fugitive from Europe.

Ribes lacustre (Pers.) Poir. (of lakes or ponds).

Swamp Black Currant. Swamp Gooseberry.

Rare. Meriden, at Lamentation Mt. (G. H. Cornwall,

1842), Salisbury, wet cold woods about Bingham Pond (Bissell). May—June.

Ribes prostratum L'Hér. (prostrate).

Skunk, Fetid or Mountain Currant.

Rare. Swampy woods: Colebrook (Weatherby), Norfolk (J. H. Barbour), Salisbury (Mrs. C. S. Phelps). May—June.

Ribes vulgare Lam. (common).

Ribes rubrum of Britton's Manual in part.

Garden Red or Red Currant. Wine Currant.

Occasional. Escaped from cultivation to fence-rows, roadsides and waste places throughout; also occurs in rocky woods and on borders of swamps in wild and remote places in the northern part of the state, appearing as if native in such situations, although the species is regarded as introduced in America. Late April—May; fruit mid-June—July. Naturalized from Europe.

A well known small fruit in cultivation. It is an interesting fact that in Southington the same plant is growing in the same rock crevice where it was fifty-five years ago (Andrews).

Ribes odoratum Wendland (fragrant).

Ribes aureum of authors, not Pursh.

Missouri, Buffalo, Flowering, Clove, Sweet or Golden Currant.

Rare. Escaped from cultivation to roadsides and about old houses: Montville (Graves), Scotland (G. Waldo), Oxford (Harger), Easton and Danbury (Eames), New Milford (Eames & E. H. Austin). Mid-April—May; fruit late July—Aug. Adventive from the West.

The fruit is edible. Often cultivated as an ornamental shrub.

HAMAMELIDACEAE. WITCH-HAZEL FAMILY.

HAMAMELIS L. Witch-hazel.

Hamamelis virginiana L.

Witch-hazel. Spotted, Witch or Snapping Alder.

Common. Moist or wet often rocky places. Sept.—Oct.

In some situations it is a valuable shrub for late-flowering

and foliage effects. The twigs were once popular as "Divining Rods" with which crafty operators were wont to impose upon the credulous. A distilled extract of the bark is extensively used as a toilet and medicinal article and is prepared in large quantities in some parts of the state. The bark, the twigs and the leaves are medicinal and are official.

LIQUIDAMBAR L. Sweet Gum Tree.

Liquidambar styraciflua L. (flowing with storax).

Sweet, Star-leaved or Red Gum. Bilsted.

Wet woods, fields and drier open places. South Norwalk (G. P. Ells, Bissell), and occasional or frequent westward near the shores of the of the Sound. May.

The wood is hard and close-grained but not strong; is inclined to warp and shrink badly. A beautiful tree in all stages of growth, free from injury by insects and much planted. Medicinal. The resinous exudation (liquidambar) is used in the preparation of chewing gum.

PLATANACEAE. PLANE TREE FAMILY.

PLATANUS L. Buttonwood. Sycamore.

Platanus occidentalis L. (western).

Buttonball. Buttonwood. Plane Tree. American or False Sycamore.

Frequent. Low grounds along streams or sometimes in drier places. May.

The wood is hard, compact and difficult to split or work: used for butcher's blocks, ox-yokes, small wares and interior finish of houses. When well grown one of our largest trees. Sometimes planted as an ornamental tree.

ROSACEAE. ROSE FAMILY.

PHYSOCARPUS Maxim. Nine-bark.

Physocarpus opulifolius (L.) Maxim. (maple-leaved).

Opulaster opulifolius Kuntze.

Nine-bark.

Rare. River shores: Norwich (Graves), Preston (W. A. Setchell, Graves). June.

SPIRAEA L.***Spiraea japonica* L.f.**

Local. Escaped from gardens to fields and roadsides: Norwich and Preston (Mrs. E. E. Rogers), Groton (Graves & Bissell), East Haddam (Bissell), Fairfield (Eames), Stamford (W. H. Hoyt). July. Native of eastern Asia.

***Spiraea prunifolia* Sieb. & Zucc. (plum-leaved).**

Bridal Wreath.

Local. Roadsides as an escape from gardens: Groton, Waterford and Montville (Graves), Southington (Bissell), Milford (Eames). June—July. Native of Asia.

***Spiraea chamaedryfolia* L. (germander-leaved), var. *ulmifolia* (Scop.) Maxim. (elm-leaved).**

Roadsides and waste places as an escape from cultivation. Monroe (Eames & C. C. Godfrey), Wilton (Eames & G. P. Ells), and occasional in the southeastern part of the state (Graves). Late May—June. Native of the Old World.

***Spiraea latifolia* (Ait.) Borkh. (broad-leaved).**

Spiraea salicifolia of Manuals in part.

Meadow-sweet. Queen of the Meadow. Bridewort. Aaron's Beard.

Frequent or common. Low wet grounds, thickets and bushy hillside pastures, or sometimes in dry ground. July—Aug.

***Spiraea tomentosa* L. (woolly).**

Hardhack. Steeple Bush. Purple Hardhack.

Frequent or common. Moist fields and thickets, old pastures, or sometimes in drier places. July—Aug.

The leaves and root are medicinal.

SORBARIA A. Br.***Sorbaria sorbifolia* (L.) A. Br. (having leaves like Sorbus, the Mountain Ash).**

Spiraea sorbifolia L.

Ash-leaved Spiraea.

Roadsides and waste places as an escape from cultivation. Rare in most districts: Granby and Plainville (Bissell), Ox-

ford and Seymour (Harger). Occasional through the southern part of the state. Mid-June — mid-Aug. Native of northern Asia.

PYRUS L.

Pyrus communis L. (common).

Pear. Choke or Wild Pear.

Occasional. Roadsides, fields and pastures as an escape from cultivation. May. Native of the Old World.

Valued in cultivation for its fruit; also its wood is used for drawing implements, for tools, in imitation of ebony, and by the wood engraver.

Pyrus baccata L. (berry-bearing).

Crab Apple. Siberian Crab. Small Crab Apple.

Rare. Roadsides and river banks as an escape from cultivation: Windsor (H. S. Clark), Hampton and Hartford (Bissell), Berlin (Andrews). May. Native of the Old World.

× **Pyrus prunifolia** Willd. (plum-leaved).

Crab Apple. Large Crab Apple.

Rare. Roadsides and fields: Ledyard (Graves), Old Saybrook (Harger), Hartford (Bissell). May. Native of the Old World.

This species is supposed to be of hybrid origin, derived from a cross between *Pyrus baccata* and *Pyrus Malus*, and it is the parent of most of the forms in cultivation.

Pyrus Malus L. (classical name for the Apple Tree).

Malus Malus Britton.

Apple. Wild Apple.

Common. Fields, roadsides, pastures and borders of woods as an escape from cultivation. May. Native of the Old World.

Our most valued cultivated fruit. The wood is close-grained, hard and tough, and is used for tool handles, shoe-makers' lasts and by the cabinet-maker.

Pyrus arbutifolia (L.) L.f. (bearing leaves like the Arbutus Tree).

Aronia arbutifolia Ell.

Chokeberry. Red Chokeberry. Dogberry.

Bogs and swamps or sometimes in dry situations. Rare or occasional in the southwestern part of the state from Huntington westward (Eames). May—early June; fruit Sept., often persisting through the winter.

Pyrus arbutifolia (L.) L.f., var. **atropurpurea** (Britton) Robinson (dark-purple).

Aronia atropurpurea Britton.

Chokeberry. Purple Chokeberry.

Shrubby swamps and low woods and thickets. Apparently rare in northern districts, becoming occasional or frequent near the coast. May—mid-June; fruit Sept., long persistent.

Most reports of *Pyrus arbutifolia* should be referred to this variety.

Pyrus melanocarpa (Michx.) Willd. (black-fruited).

Pyrus arbutifolia L. f., var. *melanocarpa* Hook.

Aronia nigra Britton.

Chokeberry. Black Chokeberry.

Occasional to common. Bogs, swamps and thickets, sometimes in dry or sterile soil, even on exposed ledges at all elevations. May—early June; Fruit Aug.—Sept.

Pyrus americana (Marsh.) DC.

Sorbus americana Marsh.

American Mountain Ash. Rowan or Service Tree. Mountain Sumac. Dogberry.

Rare or local. Swamps and about ponds or sometimes on dry ledges or in rocky woods: Stafford (A. W. Driggs, Graves), Durham and Meriden (Harger), Granby (I. Holcomb), Winchester (W. M. Shepardson), Norfolk (Miss M. C. Seymour), Canaan (Bissell), Salisbury (A. W. Driggs), Kent (E. H. Austin & Eames). May—June.

The very astringent bark and berries are employed medicinally.

Pyrus Aucuparia (L.) Ehrh. (used in bird-catching).

Sorbus Aucuparia L.

European Mountain Ash. Rowan Tree.

Rare. Escaped from cultivation to open woodland in Killingly (Bissell). June. Native of Europe.

The bark and berries are employed medicinally.

CYDONIA Pers. Quince.**Cydonia vulgaris** Pers. (common).*Pyrus Cydonia* L.

Common Quince.

Rare. Escaped from cultivation to waste and wet places in the southwestern part of the state. May; fruit Oct. Native of Europe.

The fruit is valued for preserving. The raw fruit and mucilaginous seeds are used in domestic medicinal practice.

Cydonia japonica (Thunb.) Pers.

Japan Quince.

Rare. Escaped from cultivation to a roadside in Stratford (Eames). April. Introduced from eastern Asia.

AMELANCHIER Medic. Juneberry.**Amelanchier canadensis** (L.) Medic.

Shad Bush. Service Berry. Sugar, Indian or May Pear.

Frequent. Dry or wet thickets, woods and banks. Mid-April — May; fruit June — early July.

The berries are edible but seldom found in good condition. The wood is heavy, very hard, close-grained and strong, and is sometimes used for tool handles and small implements.

Amelanchier canadensis (L.) Medic., var. *tomentula* Sarg. (woolly).

Amelanchier canadensis Medic., var. *Botryapium* Gray's Manual ed. 7.

Shad Bush.

Rare. Open or deep woods: Southington (Bissell), Colebrook (M. L. Fernald), New Milford and Kent (Eames), New Fairfield (Eames & C. C. Godfrey). Mid-April — May.

Amelanchier oblongifolia (Torr. & Gray) Roem. (oblong-leaved).

Amelanchier canadensis Medic., var. (?) *oblongifolia* Torr. & Gray.

Amelanchier Botryapium of Britton's Manual.

Amelanchier spicata of many authors, not K. Koch.

Shad Bush. Service Berry.

Common. Swamps, wet or dry woods, fields, sand plains

and in dry, rocky or sterile places. Late April — May; fruit June — early July.

The fruit is edible, often better than that of the previous species.

Amelanchier oblongifolia (Torr. & Gray) Roem., var. **micropetala** Robinson (small-petaled).

Rare. Dry plains and in sterile places: Waterford (Graves), Southington (Bissell), Oxford and Seymour (Harger). May.

CRATAEGUS L. Hawthorn. White Thorn.

This genus has received much attention from botanists in recent years and many new species have been proposed. More careful study of these may show that a part of them would more properly be regarded as varieties or hybrids than as true species.

Because of this uncertainty as to the proper treatment of some forms, in the following list the recognized species are given first in the group to which they belong. Following them will be found the names of any proposed species of uncertain status that may belong there, the names being printed in italics, instead of full-faced type.

Oxyacanthae Loud.

Crataegus monogyna Jacq. (having one pistil).

Crataegus Oxyacantha of American authors, not L.

Hawthorn. English Hawthorn. Hedge Thorn. Haw or May Tree or Bush.

Rare or local. Roadsides and old pastures. Waterford (Graves), East Hartford and West Hartford (A. W. Driggs), New Haven (Harger), Bridgeport, Fairfield and Norwalk (Eames), Stamford (W. H. Hoyt), Sharon, a great many trees over a wide area (Mrs. C. S. Phelps & Bissell). Mid-May — early June. Adventive from Europe.

Often cultivated for ornament. The berries are medicinal.

Crus-galli Loud.

Crataegus Crus-galli L. (cockspur).

Cockspur or Newcastle Thorn. Red Haw.

Pastures, roadsides and fence-rows. Occasional or fre-

quent near the coast and in the valley of the Connecticut River; rare elsewhere. Early June; fruit Oct.

The var. *EXIGUA* (Sarg.) Eggleston (small), *Crataegus exigua* Sarg., occurs in Stonington, Waterford, Lyme and East Haven (Graves) and in Southington (Andrews).

Punctatae Loud.

Crataegus punctata Jacq. (dotted).

Rare or local. Fence-rows and borders of woods: Canaan, North Canaan and Salisbury (Bissell). Early June; fruit late Sept.

Forms of uncertain status.

Crataegus umbratilis Sarg. (living in the shade).

Rare. Border of thickets: Litchfield (Bissell). Late May — early June; fruit late Oct.

Intricatae Sarg.

Crataegus foetida Ashe (fetid).

Crataegus Baxteri Sarg.

Local. Old pastures in moist, heavy soil: Windsor (Bissell). Late May; fruit early Oct.

Crataegus apposita Sarg. (apposite).

Crataegus intricata Sarg., not J. Lange.

Crataegus coccinea Britton, not L.

Crataegus coccinea L., var. *viridis* Torr. & Gray in part.

Occasional. Roadsides and pastures. Mid-May — early June; fruit late Sept. — early Oct.

Crataegus apposita Sarg., var. Bissellii (Sarg.) Eggleston.

Crataegus Bissellii Sarg.

Rare. Old pastures: Colchester (Graves), Southington (Andrews & Bissell), Trumbull (Eames). Late May; fruit late Sept.

Crataegus coccinea L. (scarlet).

Crataegus coccinea L., var. *viridis* Torr. & Gray in part.

Crataegus modesta Sarg.

Crataegus premora Ashe.

Crataegus intricata J. Lange.

Old pastures, fields and thickets. Rare in most districts:

Preston (Graves), Trumbull (Eames), Oxford (Harger), Southington (Andrews & Bissell). Occasional in the northern Connecticut Valley and in the northeastern part of the state. Late May — early June; fruit Oct.

***Crataegus Stonei* Sarg.**

Rare. Old pasture at Southington (Andrews). Late May — early June; fruit Oct.

Forms of uncertain status.

***Crataegus Hargerii* Sarg.**

Local. Fields and roadsides: Guilford (G. H. Bartlett), Southington (Andrews & Bissell), Trumbull (Eames), and frequent in Southbury, Oxford and Ansonia (Harger). Late May — early June; fruit early Oct.

Probably a form of *Crataegus apposita*.

Rotundifoliae Eggleston.

***Crataegus rotundifolia* Moench (round-leaved).**

Crataegus coccinea L., var. *rotundifolia* Sarg.

Crataegus Gravesii Sarg.

Crataegus Dodgei Ashe.

Occasional or frequent. Roadsides, pastures and hedgerows. Late May; fruit late Sept.—early Oct.

Tenuifoliae Sarg.

***Crataegus macrosperma* Ashe (large-seeded).**

Crataegus tenella Ashe.

Local. Moist pastures and thickets: Griswold, Franklin, Waterford and East Lyme (Graves), Stratford (Eames), Oxford (Harger). Last half of May; fruit Sept.

The var. **PENTANDRA** (Sarg.) Eggleston (having five stamens), *Crataegus pentandra* Sarg., occurs at Waterford (Graves).

The var. **DEMISSA** (Sarg.) Eggleston (hanging down), *Crataegus demissa* Sarg., is occasional throughout.

The var. **MATURA** (Sarg.) Eggleston (full-grown), *Crataegus matura* Sarg., occurs at Groton (Graves).

***Crataegus Grayana* Eggleston.**

Crataegus flabellata Sarg., not *Mespilus flabellata* Bosc.

Rare. East Lyme (Graves). Late May; fruit Sept.

quent near the coast and in the valley of the Connecticut River; rare elsewhere. Early June; fruit Oct.

The var. *EXIGUA* (Sarg.) Eggleston (small), *Crataegus exigua* Sarg., occurs in Stonington, Waterford, Lyme and East Haven (Graves) and in Southington (Andrews).

Punctatae Loud.

Crataegus punctata Jacq. (dotted).

Rare or local. Fence-rows and borders of woods: Canaan, North Canaan and Salisbury (Bissell). Early June; fruit late Sept.

Forms of uncertain status.

Crataegus umbratilis Sarg. (living in the shade).

Rare. Border of thickets: Litchfield (Bissell). Late May—early June; fruit late Oct.

Intricatae Sarg.

Crataegus foetida Ashe (fetid).

Crataegus Baxteri Sarg.

Local. Old pastures in moist, heavy soil: Windsor (Bissell). Late May; fruit early Oct.

Crataegus apposita Sarg. (apposite).

Crataegus intricata Sarg., not J. Lange.

Crataegus coccinea Britton, not L.

Crataegus coccinea L., var. *viridis* Torr. & Gray in part.

Occasional. Roadsides and pastures. Mid-May—early June; fruit late Sept.—early Oct.

Crataegus apposita Sarg., var. Bissellii (Sarg.) Eggleston.

Crataegus Bissellii Sarg.

Rare. Old pastures: Colchester (Graves), Southington (Andrews & Bissell), Trumbull (Eames). Late May; fruit late Sept.

Crataegus coccinea L. (scarlet).

Crataegus coccinea L., var. *viridis* Torr. & Gray in part.

Crataegus modesta Sarg.

Crataegus premora Ashe.

Crataegus intricata J. Lange.

Old pastures, fields and thickets. Rare in most districts:

Preston (Graves), Trumbull (Eames), Oxford (Harger), Southington (Andrews & Bissell). Occasional in the northern Connecticut Valley and in the northeastern part of the state. Late May — early June; fruit Oct.

Crataegus Stonei Sarg.

Rare. Old pasture at Southington (Andrews). Late May — early June; fruit Oct.

Forms of uncertain status.

Crataegus Hargerii Sarg.

Local. Fields and roadsides: Guilford (G. H. Bartlett), Southington (Andrews & Bissell), Trumbull (Eames), and frequent in Southbury, Oxford and Ansonia (Harger). Late May — early June; fruit early Oct.

Probably a form of *Crataegus appositia*.

Rotundifoliae Eggleston.

Crataegus rotundifolia Moench (round-leaved).

Crataegus coccinea L., var. *rotundifolia* Sarg.

Crataegus Gravesii Sarg.

Crataegus Dodgei Ashe.

Occasional or frequent. Roadsides, pastures and hedgerows. Late May; fruit late Sept.—early Oct.

Tenuifoliae Sarg.

Crataegus macrosperma Ashe (large-seeded).

Crataegus tenella Ashe.

Local. Moist pastures and thickets: Griswold, Franklin, Waterford and East Lyme (Graves), Stratford (Eames), Oxford (Harger). Last half of May; fruit Sept.

The var. **PENTANDRA** (Sarg.) Eggleston (having five stamens), *Crataegus pentandra* Sarg., occurs at Waterford (Graves).

The var. **DEMISSA** (Sarg.) Eggleston (hanging down), *Crataegus demissa* Sarg., is occasional throughout.

The var. **MATURA** (Sarg.) Eggleston (full-grown), *Crataegus matura* Sarg., occurs at Groton (Graves).

Crataegus Grayana Eggleston.

Crataegus flabellata Sarg., not *Mespilus flabellata* Bosc.

Rare. East Lyme (Graves). Late May; fruit Sept.

Forms of uncertain status.

Crataegus dissimilis Sarg. (dissimilar).

Rare. East Lyme (Graves). Last half of May; fruit late Sept.

Crataegus Forbesae Sarg.

Occasional in the towns of New London, Lebanon and East Lyme (Graves). Late May; fruit early Oct.

Crataegus genialis Sarg. (pleasant).

Rare. Thickets: Litchfield (Bissell). Late May; fruit Sept.

Crataegus glaucophylla Sarg. (glaucous-leaved).

Rare. Fields: Griswold (Graves), North Canaan and Cornwall (Bissell). Last half of May; fruit Sept.

Crataegus monstrata Sarg. (remarkable).

Locally plentiful in moist thickets in Oxford, Middlebury, Southbury and Woodbury (Harger). Late May; fruit Sept.

Crataegus Napaee Sarg. (of a wooded dell).

Rare. Thickets in Litchfield and Cornwall (Bissell). Late May; fruit late Sept.

Crataegus viridimontana Sarg. (of the Green Mountains).

Rare. Thickets: Litchfield (Bissell). Last half of May; fruit early Sept.

Pruinosae Sarg.

Crataegus pruinosa (Wendl.) K. Koch (frosted).

Rare. Oxford, moist thicket (Harger). Late May; fruit early October.

The forma *DISSONA* (Sarg.) Eggleston (confused), *Crataegus dissona* Sarg., occurs at New London, Waterford and East Lyme (Graves), East Windsor (Bissell), Oxford (Harger), Trumbull (Eames).

Crataegus pruinosa (Wendl.) K. Koch, var. *latisepala* (Ashe)
Eggleston (broad-sepaled).

Crataegus latisepala Ashe.

Crataegus cognata Sarg.

Frequent in the shore towns of New London County (Graves); occurs also at Windsor and Stratford (Bissell). Late May — early June; fruit Oct.

Crataegus pruinosa (Wendl.) K. Koch, var. *conjuncta* (Sarg.)
Eggleston (connected).

Crataegus conjuncta Sarg.

Rare. Pastures: Stratford (Eames), Oxford and Ansonia (Harger). Late May; fruit Oct.

Crataegus pruinosa (Wendl.) K. Koch, var. *Porteri* (Britton) Eggleston.

Crataegus Porteri Britton.

Crataegus levis Sarg.

Rare or local. Old pastures: Torrington and Litchfield (Bissell). Late May; fruit early Oct.

Crataegus Jesupi Sarg.

Rare. Fence-rows and pastures: East Windsor (Bissell). Last half of May; fruit late Sept.—early Oct.

Forms of uncertain status.

Crataegus festiva Sarg. (pretty).

Rare. East Lyme (Graves). Last of May; fruit Oct.

Crataegus incisa Sarg. (cut or notched).

Rare. Stratford, in rocky pastures (Eames). Late May—early June; fruit Oct.

Crataegus littoralis Sarg. (of the sea-shore).

Rare. New London, Waterford and East Lyme (Graves). Last half of May; fruit Oct.

Crataegus Pequotorum Sarg. (pertaining to the Pequot Indians).

Rare. Groton (Graves). Last half of May; fruit Oct.

Crataegus quinebaugensis Sarg.

Rare. Griswold, at Hopeville (Graves). Late May; fruit Oct.

Coccineae Loud.*Crataegus Holmesiana* Ashe.

Rare. Fields and roadsides: Milford (Eames), Litchfield (Bissell). Last half of May; fruit Sept.

Crataegus Pringlei Sarg.

Rare. Cornwall, in fields (Bissell). Mid-May; fruit Sept.

The var. *LOBULATA* (Sarg.) Eggleston (with small lobes), *Crataegus lobulata* Sarg., *Crataegus cristata* Ashe, occurs at Lyme (Graves & Bissell).

Crataegus pedicellata Sarg. (borne on a pedicel).*Crataegus fretalis* Sarg.*Crataegus sejuncta* Sarg.

Rare or local. Fields and roadsides: Groton (Graves), Beacon Falls, Oxford and Middlebury (Harger), Litchfield and Cornwall (Bissell). Last half of May; fruit early Sept.

Crataegus polita Sarg. (polished).

Rare. East Lyme (Graves). Last half of May; fruit late Aug.—early Sept.

This and the three preceding species are well shaped trees with handsome foliage, beautiful both in flower and fruit, and are well worthy of cultivation for ornament.

Forms of uncertain status.

Crataegus Eamesii Sarg.

Rare. Dry banks: Stratford (Eames), Ansonia (Harger). Last half of May; fruit late Aug.—early Sept.

Crataegus neo-londinensis Sarg.

Occasional near the coast in Groton and East Lyme (Graves). Late May; fruit early Sept.

Molles Sarg.**Crataegus Arnoldiana** Sarg.

Rare. East Lyme (Graves). Mid-May; fruit early Sept.

Anomalae Sarg.**Crataegus Brainerdi** Sarg.

In its typical form not known in Connecticut. The var. SCABRIDA (Sarg.) Eggleston (rough), *Crataegus scabrida* Sarg., occurs in thickets at Litchfield (Bissell). Late May; fruit late Sept.

Macracanthae Loud.**Crataegus macracantha** Lodd. (long-thorned).*Crataegus coccinea* L., var. *macracantha* Dudley.

Rare or local. Fields and pastures: East Windsor, Litchfield and Cornwall (Bissell). Late May—early June; fruit Sept.

The var. RHOMBIFOLIA (Sarg.) Eggleston (having lozenge-shaped leaves), *Crataegus rhombifolia* Sarg., occurs

at Norwich and Griswold (Graves), and at Southington (Bissell, Andrews).

Forms of uncertain status.

Crataegus ferentaria Sarg. (armed).

Rare. Franklin (Graves). Last half of May; fruit early Sept.

Crataegus fulgens Sarg. (shining).

Rare. Stratford, ledges on bank of Housatonic River (Eames). Early June; fruit late Sept.—early Oct.

Crataegus pellucida Sarg. (transparent).

Rare. Litchfield, in pastures (Bissell). Late May; fruit late Sept.

Crataegus spatiosa Sarg. (spacious; ample).

Rare. Groton (Graves). Last half of May; fruit Sept.

Crataegus stratfordensis Sarg.

Rare. Stratford, dry bank on the coast (Eames). Early June; fruit Sept.

FRAGARIA L. Strawberry.

Fragaria virginiana Duchesne.

Fragaria canadensis Michx. in part.

Fragaria terrae-novae Rydb.

Wild or Field Strawberry.

Common. Fields, pastures and roadsides. Late April — May.

Berries delicious. Hybrids and derivatives are common and valuable in cultivation. The leaves are medicinal.

Fragaria virginiana Duchesne, var. *illinoensis* (Prince) Gray.

Fragaria virginiana Duchesne, var. *Grayana* Rydb.

Rare. Waste ground: Southington (Bissell), Oxford (Harger), Bridgeport (Eames). Apparently an escape from cultivation. Late April — May. Introduced from the West.

Fragaria vesca L. (small or weak).

European Wood Strawberry.

Rare or local. Grassy places: New London and Griswold (Graves), Hartford (Bissell), Salisbury (M. L. Fernald). May — June. In Connecticut apparently naturalized from Europe.

The var. ALBA (Ehrh.) Rydb. (white) occurs at Southington (Bissell).

Fragaria vesca L., var. *americana* Porter.

Fragaria americana Britton.

Wild or American Wood Strawberry.

Rocky woods. Rare near the coast: Franklin and Preston (Graves), New Haven (D. C. Eaton). Frequent northward. May — June.

DUCHESNEA Smith. Indian Strawberry.

Duchesnea indica (Andr.) Focke.

Fragaria indica Andr.

Yellow, Indian or Mock Strawberry.

Rare. Escaped from cultivation to lawns: New London (Graves), Stratford (Mrs. R. H. Russell), Fairfield (Eames). April — Sept. Adventive from India.

Often grown in hanging-baskets for its yellow flowers and handsome but insipid berries.

WALDSTEINIA Willd.

Waldsteinia fragarioides (Michx.) Tratt. (strawberry-like).

Barren, Dry or Yellow-flowered Strawberry.

Rare. Rocky woods or thickets: Norfolk and Colebrook (H. C. Beardslee), Torrington (Miss B. A. Parker). Late April — May.

POTENTILLA L. Cinquefoil. Five-finger.

Potentilla arguta Pursh (sharp).

Drymocallis arguta Rydb.

Tall Cinquefoil.

Rare or local. Open sterile soil and on dry rocky hills. June — Aug.

Potentilla monspeliensis L.

Potentilla norvegica Gray's Manual ed. 6, not L.

Rough Cinquefoil.

Frequent. Fields, roadsides and waste places. June — Sept.

Potentilla monspeliensis L., var. *norvegica* (L.) Rydb.

Potentilla norvegica L.

Rare. East Granby, rocky slopes of Peak Mt. (A. W. Driggs). June—July.

Potentilla argentea L. (silvery).

Silvery or Hoary Cinquefoil.

Frequent to common. Dry, sterile or sandy open places. Mid-May—Sept.

Potentilla intermedia L. (intermediate).

Downy Cinquefoil.

Rare. Roadsides and waste ground in Glastonbury (Bissell), East Haven (Harger), Naugatuck (A. E. Blewitt). June—July. Native of Europe.

Potentilla recta L. (upright).

Potentilla sulphurea Lam.

Rare. Dry fields and wastes: Norwich (Mrs. E. E. Rogers), Southington (Andrews, Bissell), Bristol (W. A. Terry), Naugatuck (A. E. Blewitt), Newtown (J. M. Otis), Kent (Eames & C. C. Godfrey). June—July. Adventive from Europe.

Potentilla palustris (L.) Scop. (of marshes).

Comarum palustre L.

Marsh or Purple Cinquefoil or Five-finger. Bog Strawberry. Purple-wort.

Rare or local. Boggy swamps and borders of lakes: New Haven (D. C. Eaton), East Granby (Weatherby), Hamden, Litchfield and Danbury (Harger), Salisbury, plentiful about Twin Lakes (Bissell, Mrs. C. S. Phelps et al.), June—July.

Potentilla fruticosa L. (shrubby).

Dasiphora fruticosa Rydb.

Hardhack. Goshen Hardhack. Shrubby Cinquefoil.

Low fields, wet pastures and boggy swamps. Rare near the coast: East Lyme (Miss A. M. Ryon), Guilford (G. H. Bartlett), New Haven (G. W. Hawes). Occasional elsewhere, except in Litchfield County, where it is common and often a serious pest in low pastures. June—Sept.

Potentilla tridentata Ait. (three-toothed).

Sibbaldiopsis tridentata Rydb.

Three-toothed or Mountain Cinquefoil or Five-finger.

Rare or local. Exposed ledges and bleak mountain tops: Norfolk (Miss M. C. Seymour, Weatherby & Bissell), Cornwall (E. E. Brewster), Salisbury (Bissell et al.). May—July.

Potentilla pacifica Howell.

Potentilla Anserina of American authors in part, not L.

Argentina Anserina Rydb., var. *grandis* Rydb.

Silver Weed. Argentina. Wild Tansy.

Inner edges of salt marshes along the coast. Milford, locally plentiful (Eames), New Haven (Bissell), East Haven (Harger), Guilford (G. H. Bartlett); and common eastward. Mid-May—July.

Potentilla pumila Poir. (dwarf).

Frequent. Roadsides and fields. April—May.

The comparative distribution of this and the species next following has not been worked out.

Potentilla canadensis L.

Yellow Strawberry. Cinquefoil. Five-finger. Running Buttercup.

Common. Dry, open places, especially on hillsides. April—Aug.

Potentilla canadensis L., var. *simplex* (Michx.) Torr. & Gray (simple).

Potentilla simplex Michx.

Cinquefoil. Five-finger.

Frequent or common. Woods, fields and roadsides. May—Aug.

FILIPENDULA Hill.

Filipendula rubra (Hill) Robinson (red).

Ulmaria rubra Hill.

Spiraea lobata Gronov.

Queen of the Prairie.

Rare or local. Roadsides as an escape from cultivation: Groton and Sprague (Graves), Monroe, Trumbull and Fairfield (Eames). June—July. Naturalized from the West.

Filipendula Ulmaria (L.) Maxim. (Ulmus, the Elm).

Ulmaria palustris Moench.

Ulmaria Ulmaria Barnh.

Spiraea Ulmaria L.

Meadow-sweet. Honey-sweet. Mead-sweet. Queen of the Meadow. Meadow Queen. Bridewort. English Meadow-sweet.

Rare or local. Escaped from cultivation to roadsides and waste places: East Windsor and Southington (Bissell), Oxford (Harger), Trumbull, Norwalk and Ridgefield (Eames). July — mid-Aug. Native of Europe.

Filipendula hexapetala Gilib. (six-petaled).

Spiraea Filipendula L.

Pride of the Meadow. Dropwort.

Rare. Southington, escaped from cultivation to a roadside (Andrews). May — June. Fugitive from Europe.

GEUM L. Avens.

Geum canadense Jacq.

Geum album J. F. Gmel.

White Avens. Herb Bennet.

Frequent or common. Woods, thickets and shaded places. Mid-June — Aug.

Geum flavum (Porter) Bicknell (yellow).

Cream-colored Avens.

Occasional. Rocky woods, thickets and partially shaded places. Mid-June — Aug.

Geum virginianum L.

Rough or White Avens. Herb Bennet. Chocolate-root.

Frequent. Wet meadows, low thickets and along streams. Mid-June — July.

Geum strictum Ait. (strict or straight).

Yellow or Field Avens. Herb Bennet.

Rare or local. Open swamps, wet pastures or sometimes in dry ground. Late June — mid-Aug.

Geum rivale L. (of brook-sides).

Purple, Water or Drooping Avens. Chocolate-root. Indian Chocolate-root.

Wet or boggy meadows. Rare near the coast: Griswold

(E. F. Burleson, Graves), Sprague (Miss Smith), Guilford (G. H. Bartlett), New Haven and Orange (D. C. Eaton). Occasional or local northward and usually plentiful where it occurs. May—June.

The root is used medicinally.

KERRIA DC.

Kerria japonica (Thunb.) DC.

Japanese Rose. Globeflower.

Rare. Ledyard, roadside as an escape from garden (Graves). Late May—June. Introduced from eastern Asia.

RUBUS L. Bramble.

Rubus idaeus L. (of Mt. Ida.)

European Red Raspberry.

Rare. Roadsides and fence-rows: Southington, escaped from an old garden (W. H. Blanchard), Oxford (Harger), Bridgeport, plentiful in one locality (Eames). Mid-May—June; fruit July. Adventive from the Old World.

Formerly much cultivated and represented by the Antwerp, Fontenay, etc.

Rubus idaeus L., var. *aculeatissimus* Regel & Tiling (very prickly).

Rubus idaeus L., var. *strigosus* Maxim.

Rubus strigosus Michx.

Red or Wild Red Raspberry.

Fence-rows, pastures and thickets. Rare in the coast region of the southwestern part of the state; occasional or frequent elsewhere. Mid-May—June; fruit late June—July.

Valued for its fruit in cultivation. The Cuthbert and other light red berries of gardens are of this type.

× ? **Rubus neglectus** Peck (neglected).

Purple Wild Raspberry.

Rare. Moist thicket: Oxford (Harger). Mid-May—June.

Thought to be a hybrid between *Rubus idaeus* var. *aculeatissimus* and *Rubus occidentalis*. The Shaffer, Gladstone and Philadelphia are cultivated forms of this species.

Rubus phoenicolasius Maxim. (having purple-red hairs).

Wineberry.

Rare. Escaped from cultivation to fields and roadsides: Southington (Andrews), Fairfield (Eames), Norwalk (E. H. Baldwin). June — Aug. Adventive from Japan.

Cultivated as an ornamental plant and for its fruit.

Rubus occidentalis L. (western).

Black Raspberry. Thimbleberry. Black-cap.

Common. Thickets, fence-rows, roadsides and pastures. Mid-May — June; fruit late June — July.

The Ohio, Gregg, etc., are cultivated forms of this species. Both wild and cultivated its fruit is valued for dessert and preserving.

The forma *PALLIDUS* (Bailey) Robinson (pale) has been found in Bridgeport (Eames) and Oxford (Harger). The Golden Queen of the gardens is a derivative of this form.

Rubus odoratus L. (fragrant).

Purple Flowering Raspberry.

Rocky woods. Rare near the coast; becoming occasional or frequent northward. June — Aug.; fruit Aug. — Sept.

Rubus triflorus Richards. (three-flowered).

Rubus americanus Britton.

Dwarf or Running Raspberry.

Wet, often rocky woods, and in wooded swamps. Rare near the coast; becoming occasional or frequent northward. May; fruit June.

Sometimes occurs with pink flowers.

Rubus allegheniensis Porter.

Rubus villosus Gray's Manual ed. 6 in large part, not Ait.

Rubus nigrobaccus Bailey.

High-bush or Mulberry Blackberry.

Common in woods, thickets and pastures in the hilly and mountainous parts of the state; occasional or local at low elevations and in sandy soil elsewhere. Mid-May — June; fruit late July — Sept.

One of our most valued wild berries and often cultivated, the Taylor being a representative. The fruit-juice and root-

bark of this and other species are valued in domestic medical practice for their astringent properties and are also officinal.

Rubus allegheniensis Porter, var. **Gravesii** Fernald.

Rare. Moist or dry thickets: Groton (Graves), Southington (Andrews), New Milford (Eames). June; fruit early Aug.

Rubus frondosus Bigel. (leafy).

Rubus villosus Ait., var. *frondosus* Torr.

Rubus philadelphicus Blanchard.

Rare or occasional. Open pastures and dry hillsides. Mid-May—June.

Rubus pergratus Blanchard (very pleasant).

Rubus orarius Blanchard.

Rubus amnicolus Blanchard.

Rare. Roadsides and thickets: Southington (Bissell), Winchester and Colebrook (M. L. Fernald). Late May—early June; fruit July.

Rubus recurvans Blanchard (recurving).

Rubus arundellanus Blanchard.

Fields and open woods. Occasional in the northwestern part of the state; frequent elsewhere. Mid-May—June; fruit July.

Rubus Randii (Bailey) Rydb.

Rubus argutus Link, var. *Randii* Bailey.

Rubus recurvicaulis Blanchard.

Woods and shaded places in moist or wet ground. Rare or occasional in central and northern Connecticut; its exact range unknown. June.

Rubus laciniatus Willd. (slashed).

Cut-leaved or Evergreen Blackberry.

Rare. Bridgeport, spontaneous along a sandy roadside and in an adjoining field (E. H. Baldwin). June—July. Probably native of Europe.

Cultivated for ornament.

Rubus cuneifolius Pursh (wedge-leaved).

Sand or Knee-high Blackberry. Ankle Brier.

Dry open sandy or sterile places. Occasional or frequent

in the southwestern part of the state, sometimes covering large areas; becoming rare northward and eastward, reaching Newtown (Eames), Southbury (Harger), Farmington (W. H. Blanchard), Glastonbury (Mrs. F. W. Starmer), Colchester (Graves). June — early July; fruit mid-July — Sept.

The fruit is delicious. The bark of the rootstock is medicinal and is official.

Rubus Andrewsianus Blanchard.

High-bush Blackberry.

Dry or moist open or shaded situations. Occasional or frequent over most of the state, but apparently absent from the mountainous areas. June; fruit mid-July — Sept.

The fruit of this species is commonly of good size and quality and is the High-bush Blackberry usually gathered in some parts of the state.

Rubus floricomus Blanchard (covered with flowers).

Local. Woods and pastures in heavy soils: Southington and Meriden (W. H. Blanchard). June; fruit Aug.

Rubus setosus Bigel. (bristly).

Rubus nigricans Rydb. in part.

Occasional or frequent. Usually in swamps and wet ground, but sometimes in drier places. June — July.

Rubus nigricans Rydb. (blackish).

Rubus hispidus L., var. *suberectus* Peck.

Rubus setosus of authors in part, not Bigel.

Rubus vermontanus Blanchard.

Rubus semisetosus Blanchard (?).

Dry hills and plains. Apparently rare or occasional, but its distribution is not known. June — July.

Rubus hispidus L. (rough-hairy).

Running Swamp Blackberry.

Common. Swamps, bogs, wet woods and fields, or sometimes in drier places. Mid-June — July.

Rubus villosus Ait. (hairy).

Rubus canadensis of authors, not L.

Rubus procumbens Muhl.

Dewberry. Running Brier. Running or Low Blackberry.

Dry, especially open situations. Frequent or common at low elevations, but rare or absent in mountainous districts. Late May—June; fruit July—Aug.

Its berries are the best of the low vines and are not excelled by those of any blackberry. The Lucretia Dewberry is a cultivated form derived from a variety of this species. Several recently proposed species not included in this list are obviously closely related to *Rubus villosus* and await further study.

Rubus villosus Ait., var. **humifusus** Torr. & Gray (spreading over the ground).

Rubus Enslenii Trattinick.

Rubus Baileyanus Britton.

Rubus subuniflorus Rydb.

Frequent or common. Dry soil in open situations, nearly throughout, but especially plentiful at low elevations and near the coast. Late May—June; fruit July—Aug.

The fruit is inferior in quality to that of the typical form of the species.

DALIBARDA Kalm.

Dalibarda repens L. (creeping).

Dalibarda.

Rare. Moist rich woods: Winchester (Andrews, Bissell), Colebrook (J. W. Robbins), Norfolk (Miss M. C. Seymour). Mid-June—mid-Aug.

AGRIMONIA L. Agrimony.

Agrimonia gryposepala Wallr. (having bent or hooked sepals).

Agrimonia Eupatoria Gray's Manual ed. 6 in part, not L.

Agrimonia hirsuta Bicknell.

Stickseed. Cocklebur. Beggar-ticks. Hairy Agrimony.

Frequent. Roadsides, thickets and borders of woods. Late June—Aug.

The plant is medicinal.

Agrimonia striata Michx. (grooved).

Agrimonia Eupatoria Gray's Manual ed. 6 in part, not L.

Agrimonia Brittoniana Bicknell.

Stickseed. Beggar-ticks.

Rocky woods, thickets and more open places. Rare near the coast and in the southwestern part of the state; frequent elsewhere. Late June — Sept.

Agrimonia mollis (Torr. & Gray) Britton (soft).

Agrimonia pubescens Wallr. (?)

Soft Agrimony.

Occasional or frequent. Dry woods, thickets and more open places. July — Aug.

Agrimonia parviflora Ait. (small-flowered).

Small or Many-flowered Agrimony.

Rare. Fairfield, edge of wet meadow (Eames), Southbury, roadside (Harger, Bissell), Salisbury (Mrs. C. S. Phelps). Aug.

Agrimonia rostellata Wallr. (having a little beak).

Agrimonia striata Bicknell, not Michx.

Woodland Agrimony.

Dry rich or rocky woods. Occasional in the southern part of the state, extending northward as far as Middletown and Southington (Bissell). July — Aug.

SANGUISORBA L. Burnet.

Sanguisorba canadensis L.

Poterium canadense Gray.

Canadian, Wild or Great American Burnet.

Locally plentiful along the borders of tidal marshes and about fresh-water swamps and streams near the coast; also occurs in low grounds along the Farmington River in Windsor (H. S. Clark), Farmington (Bissell), and Simsbury (A. W. Driggs); and has been collected at Berlin (J. N. Bishop). Mid-July — mid-Oct.

Sanguisorba minor Scop. (smaller).

Poterium Sanguisorba L.

Sanguisorba Sanguisorba Britton.

Garden or Salad Burnet. Bloodwort. Bibernel. Pimpernel. Tope's-plant.

Rare. Monroe, in dry rocky ground (H. C. Beardslee). July — Sept. Fugitive from Europe or Asia.

Formerly cultivated as a salad plant.

ROSA L. Rose.**Rosa setigera Michx. (bristle-bearing).**

Climbing or Prairie Rose.

Rare. Escaped from cultivation to roadsides, waste places and thickets: Voluntown (Graves), Farmington (H. S. Clark), Stratford and Bridgeport (Eames). June—July. Adventive from the West.

Rosa blanda Ait. (smooth).

Meadow, Thornless or Early Wild Rose.

Sandy soil. Rare in most districts: Hartford (H. J. Koehler), Milford (Andrews). Occasional along the Housatonic River from Oxford (Harger) northward. Late May—June.

Rosa spinosissima L. (very spiny).

Scotch or Burnet Rose.

Rare. Escaped from cultivation to roadsides in Preston and Franklin (Graves). June—July. Adventive from Europe.

Rosa cinnamomea L. (cinnamon-scented).

Cinnamon or Kitchen Rose.

Rare or occasional. Escaped from cultivation to roadsides and waste places near old houses; in the hills of Salisbury sometimes forming dense thickets (Bissell). June—July. Naturalized from Europe.

Rosa rugosa Thunb. (wrinkled).

Japanese Rose.

Rare. Milford, escaped from cultivation about old house-sites (Eames & C. C. Godfrey); occurs also at Bridgeport and Greenwich (Eames). June—Aug. Adventive from Asia.

Rosa canina L. (of a dog).

Dog, Canker, Hip or Brier Rose.

Rare. Pastures and roadsides: Bolton (C. C. Hanmer), Southington (Andrews). June—July. Adventive from Europe.

Rosa rubiginosa L. (rusty).

Sweetbrier. Eglantine. Hip or Kitchen Rose.

Occasional or frequent. Thickets, pastures and roadsides. June—July. Naturalized from Europe.

Rosa rubiginosa L., var. **micrantha** (Sm.) Lindl. (small-flowered.)

Small-flowered Sweetbrier.

Rare. Granby, along a roadside (H. S. Clark, Weatherby & Bissell), New Haven (A. L. Winton). June—July. Adventive from England.

Rosa gallica L.

French, Provence or Red Rose.

Rare. Escaped from cultivation to roadsides and about old house-sites: Ledyard and Franklin (Graves), Thompson (Bissell), Southington (Andrews, Bissell, Weatherby), Westport (Eames), Wilton (Miss A. E. Carpenter). June. Adventive from Europe.

An old-fashioned garden rose. The dried petals are medicinal and are officinal.

Rosa nitida Willd. (shining).

Shining or Northeastern Rose.

Rare. In swamps: Thompson (R. W. Woodward & Weatherby), Stafford (Graves). June—July.

Rosa carolina L.

Swamp Wild Rose.

Frequent or common. Swamps and in low ground. June—July.

Rosa virginiana Mill.

Rosa lucida Ehrh.

Wild or Large Wild Rose.

Occasional or frequent. Low grounds, banks of streams, fields and thickets. June—July.

Rosa humilis Marsh. (low).

Wild Rose. Dwarf, Low or Pasture Wild Rose.

Frequent or common. Pastures, thickets and open woods, often in dry ground. June—July. An apparent hybrid of this with *Rosa nitida* occurs at Stafford (Weatherby & Bissell).

PRUNUS L. Plum. Cherry.**Prunus serotina** Ehrh. (late).

Wild, Rum, Whiskey or Cabinet Cherry. Wild Black Cherry.

Common. Woods, pastures, fence-rows and roadsides. Mid-May—June; fruit Aug.—Sept.

The bark is officinal under the name "*Prunus virginiana*," and is valued for its tonic as well as sedative properties, the latter due to its hydrocyanic acid, a constituent also of all other parts of the plant. The foliage of this and probably that of related species is believed to be poisonous to cattle when wilted, although harmless when fresh. The kernels of the seeds, inadvertently swallowed by children, have been fatally poisonous. The wood is light, strong, hard and close-grained, valued for cabinet work and interior finish. The tree is ornamental and worthy of planting in some situations.

***Prunus virginiana* L.**

Choke Cherry.

Thickets, woods, fence-rows and roadsides. Rare near the coast in the southeastern part of the state but frequent or common elsewhere. Mid-May—June; fruit mid-July—Aug.

***Prunus pennsylvanica* L. f.**

Wild Red Cherry. Bird, Pin or Fire Cherry.

Occasional. Found in various soils and situations, but especially in rocky woods and clearings. May; fruit July.

The wood is light, soft and close-grained.

***Prunus alleghaniensis* Porter..**

Alleghany or Mountain Plum. Sloe.

Rare. Lisbon, sandy bottoms along the Quinnebaug River, and Lyme, bank of the Connecticut River (Graves); Bridgeport, wet thicket bordering a small stream, and Monroe, hillside pasture (Eames); Southbury, roadside in sandy soil (Harger). May; fruit Aug.

***Prunus instititia* L. (grafted).**

Prunus spinosa L., var. *instititia* Gray's Manual ed. 6.

Damson. Bullace Plum.

Rare. Old Lyme, escaped from a hedge (Graves), Fairfield, rocky hillside (Eames). May; fruit Aug.—Sept. Adventive from Europe.

***Prunus maritima* Wang. (of the sea-coast).**

Beach Plum.

In sandy soil. Frequent or common on the shores of the Sound and about tidal streams and marshes, also occasional in dry places a few miles inland. Mid-May — mid-June; fruit late Aug.—Sept.

The fruit is sometimes gathered for preserves.

Prunus Mahaleb L. (Arabic name).

Mahaleb, St. Lucie or Perfumed Cherry.

Rare or local. Fields, pastures and roadsides: New London and Groton (Graves), Norwalk (E. H. Baldwin). May — June. Naturalized from Europe.

Is largely imported and used for cherry-tree stocks.

Prunus Gravesii Small.

Beach Plum.

Rare. Groton, gravelly ridge near the Sound (Graves). Last week in May; fruit first week in Sept.

Prunus cuneata Raf. (wedge-shaped).

Prunus pumila Gray's Manual ed. 6 in part.

Sand or Dwarf Cherry.

Sand plains and tops of rocky hills. Norwich (W. A. Setchell, Mrs. E. E. Rogers), and rare, local or occasional in the northern two-thirds of the state. May; fruit Aug.

Prunus avium L. (of birds).

Cherry. Sweet, Black, Bird or Mazzard Cherry.

Frequent. Roadsides, fence-rows, woods and thickets. Late April — May; fruit mid-June—July. Naturalized from Europe.

In its cultivated forms valuable for its fruit, that of the wild plants being also sometimes used. The wood is valued for cabinet work.

Prunus Cerasus L. (classical name for the Cherry-tree).

Sour, Pie, Red, Morello or Old-fashioned Cherry. Griottes.

Rare. Escaped from cultivation to roadsides: Ledyard, New London and Waterford (Graves), Thompson and Bristol (Bissell), Southington (Andrews, Bissell), Stratford (Eames). May; fruit July. Native of Europe.

Cultivated for its fruit.

***Prunus nigra* Ait. (black).**

Wild, Canada or Horse Plum.

Rare. Norfolk, a few trees about an abandoned garden (A. W. Driggs), Oxford (Harger). May; fruit Aug.—Sept.

Has given rise to some choice fruit-bearing varieties in cultivation.

***Prunus americana* Marsh.**

Wild Plum. Wild Yellow, Red or Goose Plum.

Wet or dry soils in various situations, especially along streams. Rare in southern districts, becoming occasional northward. May; fruit mid-Aug. Apparently, in part, introduced near the coast.

It is the most prolific source of cultivated native Plums suited to the cold North.

***Prunus domestica* L. (domestic).**

Garden Plum.

Rare. Escaped from cultivation to roadsides and waste places: New London (Graves), Hartford (H. S. Clark & Bissell), Southington (Andrews & Bissell), Oxford (Harger), Fairfield (Eames & C. K. Averill). May; fruit Aug.—Sept. Native of the Old World.

Frequently cultivated.

***Prunus Persica* (L.) Stokes.**

Amygdalus Persica L.

Peach.

Rare. Escaped from cultivation to roadsides, fence-rows and waste places in the southern part of the state. Late April — May; fruit Aug.—Sept. Native of Asia.

A valued fruit in cultivation. Some forms are occasionally cultivated for ornament. Medicinal.

LEGUMINOSAE. PULSE FAMILY.***Gleditsia* L. Honey Locust.*****Gleditsia triacanthos* L. (three-thorned).**

Honey Locust.

Rare, occasional or local. Pastures, roadsides and fence-

rows as an escape from cultivation. May—June. Naturalized from the West or South.

The wood is coarse-grained but strong and durable. The name Honey Locust is supposed to refer to the sweetness of the pulp surrounding the seeds in the pod. Often planted for hedges or as an ornamental tree.

CASSIA L. Senna.

Cassia marilandica L.

Wild or American Senna.

Roadsides or alluvial soil, usually in moist ground. Rare or occasional in most sections, but frequent along the Housatonic River. July—Aug.

The leaves have medicinal properties like those of officinal Senna and are sometimes used as a substitute.

Cassia Chamaecrista L. (ground cock's-comb).

Partridge Pea.

Sandy fields and railroad banks. Common on and near the coast, extending inland as far as Glastonbury (H. S. Clark), and Seymour (Harger). July—Sept.

Cassia nictitans L. (winking).

Wild Sensitive Plant. Sensitive Pea.

Common. Sandy fields and dry sterile ground. July—Sept.

CERCIS L. Redbud. Judas Tree.

Cercis canadensis L.

Redbud.

Rare. Sparingly escaped about an old nursery at Wethersfield (H. S. Clark & Bissell). April. Fugitive from the South.

BAPTISIA Vent. False Indigo.

Baptisia tinctoria (L.) R. Br. (used for dyeing).

Wild Indigo. Horsefly-weed.

Common. Dry wastes, pastures, thickets and open woods in sandy or poor soils. July—Aug.

The leaves have been used as a substitute for Indigo and the young shoots are sometimes eaten like Asparagus. The roots and leaves have medicinal value.

CROTALARIA L. Rattle-box.***Crotalaria sagittalis* L. (shaped like an arrow-head).**

Rattle-box.

Frequent to common. Dry sandy or sterile ground. July — Sept.

This plant when present in hay is known to cause serious and fatal poisoning of horses and sometimes of cattle, its mode of action being similar to that of the western Loco-weeds.

CYTISUS L. Broom.***Cytisus scoparius* (L.) Link (broom-like).**

Scotch Broom.

Rare. Meriden, one colony by a roadside (Miss E. J. Leonard). July — Aug. Fugitive from Europe.

The dried tops are medicinal and are official.

LUPINUS L. Lupine.***Lupinus perennis* L. (perennial).**

Wild Lupine. Blue Bean. Sundial.

Dry or sandy soil. Found nearly throughout, though very local and uneven in its distribution, but, in general, rare westward and occasional or frequent eastward. May — June.

TRIFOLIUM L. Clover. Trefoil.***Trifolium arvense* L. (of cultivated ground).**

Rabbit-foot or Stone Clover.

Common. Dry fields and roadsides. June — Sept. Naturalized from Europe.

***Trifolium incarnatum* L. (flesh-colored).**

Crimson or Italian Clover.

Rare. Fields and cultivated ground as an escape from cultivation. June — July. Fugitive from Europe.

Often grown as a cover-crop. Very brilliant when in full bloom. All the clovers, through the agency of bacterial nodules on their roots, are exceedingly valuable as storers of nitrogen in the soil.

***Trifolium pratense* L. (of meadows).**

Red, Common Red, Meadow or Pea-vine Clover.

Common. Meadows, fields and roadsides. May—June.
Naturalized from Europe.

Extensively cultivated for fodder and for fertilizer. The blossoms are used medicinally.

***Trifolium repens* L. (creeping).**

White or Honeysuckle Clover.

Common. Fields, meadows, roadsides and lawns. May—June. Probably, at least for the most part, introduced from Europe.

Valuable for pasturage, for lawns and as a honey plant. Some authorities regard this species as the true Irish Shamrock.

***Trifolium hybridum* L. (mongrel).**

Alsike or Swedish Clover.

Frequent. Cultivated fields, roadsides and waste ground, usually in moist places. June—Aug. Naturalized from Europe.

Valuable for hay and as a honey plant, thriving best on heavy soils.

***Trifolium agrarium* L. (of fields).**

Trifolium aureum at least of American authors.

Yellow or Hop Clover.

Common. Fields and roadsides. June—Aug. Naturalized from Europe. Of little value as a forage plant.

***Trifolium procumbens* L. (trailing).**

Low Hop Clover.

Dry fields. Occasional to frequent near the coast; rare elsewhere. June—July. Naturalized from Europe.

MELILOTUS Hill. Sweet Clover.

***Melilotus officinalis* (L.) Lam. (of the shops).**

Yellow Melilot or Sweet Clover.

Occasional or local. Waste places. June—Aug. Naturalized from Europe.

The leaves and flowering tops are medicinal.

***Melilotus alba* Desr. (white).**

White Melilot or Sweet Clover. Bokhara Clover.

1. The first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the
the first of these is the fact that the
the first of these is the fact that the

the first of these is the fact that the
the first of these is the fact that the

Local or frequent. Roadsides and waste places. June — Aug. Naturalized from Europe.

Sometimes grown for forage or as a honey plant. The leaves and flowering tops are sometimes used medicinally.

MEDICAGO L. Medick.

Medicago sativa L. (sown).

Lucerne. Alfalfa.

Rare or occasional. Fields and roadsides as an escape from cultivation. June — Aug. Introduced from Europe.

In some parts of the United States of great value as a forage plant and important as a source of honey, but not often successfully grown in Connecticut.

Medicago lupulina L. (hop-like).

Hop or Black Medick. Nonesuch.

Frequent. Waste places and roadsides. June — July. Naturalized from Europe.

The seed is a common adulteration in clover seed.

Medicago arabica (L.) Huds.

Medicago maculata Sibth.

Spotted Medick.

Rare. New London, in cultivated ground (Graves). June — Aug. Fugitive from Europe.

Medicago hispida Gaertn. (rough-hairy).

Medicago denticulata Willd.

Toothed Medick. Bur Clover.

Rare. Hartford, in waste ground (H. S. Clark). Sept. — Oct. Fugitive from Europe.

HOSACKIA Dougl.

Hosackia americana (Nutt.) Piper.

Hosackia Purshiana Benth.

Lotus americanus Bischoff.

Rare. Bridgeport, a waif in waste ground (Eames). June — Aug. Fugitive from the western United States.

LOTUS L. Bird's-foot Trefoil.

Lotus corniculatus L. (horned).

Bloom-fell. Bird's-foot Trefoil. Ground Honeysuckle.



Rare. Fields and waste ground: Naugatuck (Mrs. C. H. Lyman & B. B. Bristol), Bridgeport (Eames). June — Sept. Adventive from Europe.

AMORPHA L.

***Amorpha fruticosa* L.** (shrubby).

False or Bastard Indigo.

Rare. Roadsides as an escape from cultivation: Middletown (Harger), Southington (Andrews), New Haven (D. C. Eaton), Hartford and Wethersfield (Bissell). May — July. Adventive from the West.

TEPHROSIA Pers. Hoary Pea.

***Tephrosia virginiana* (L.) Pers.**

Cracca virginiana L.

Goat's Rue. Catgut.

Rare or local. Dry sandy or rocky soils. June.

The roots are sometimes used medicinally.

ROBINIA L. Locust.

***Robinia Pseudo-Acacia* L.** (false Acacia).

Common or Black Locust. False Acacia.

Frequent. Fields and roadsides as an escape from cultivation. June. Naturalized from the South.

Cultivated for ornament and sometimes planted to cover sand-blows. The wood is hard and very durable, used for fence-posts and railroad ties. The bark of the root is medicinal.

***Robinia viscosa* Vent.** (sticky).

Clammy Locust.

Occasional. Roadsides, fields and woods, usually in sandy ground. June — July. Naturalized from the South.

***Robinia hispida* L.** (rough-hairy).

Rose Acacia. Flowering or Bristly Locust.

Rare. Dry or sandy roadsides as an escape from cultivation: Groton (Graves), Guilford (G. H. Bartlett), South Windsor (Weatherby), North Haven (Harger), Berlin and Southington (Andrews & Bissell), Seymour and South Nor-

walk (Eames), Salisbury (Mrs. C. S. Phelps). May—June.
Adventive from the Southwest.

Cultivated as as ornamental shrub.

GLYCYRRHIZA L. Liquorice.

Glycyrrhiza lepidota (Nutt.) Pursh (scaly).

Wild Liquorice.

Rare. New Haven, formerly well established on a road-side (D. C. Eaton); now apparently exterminated. May—Aug. Fugitive from the West.

CORONILLA L.

Coronilla varia L. (variable).

Crown Vetch. Russian Clover. Axwort.

Occasional. Roadsides, waste places and in open fields as an escape from cultivation. June—Sept. Naturalized from Europe.

Very persistent and difficult to eradicate.

DESMODIUM Desv. Tick Trefoil.

Desmodium nudiflorum (L.) DC. (naked-flowered).

Meibomia nudiflora Kuntze.

Occasional or frequent. Dry woods. July—Aug.

Desmodium grandiflorum (Walt.) DC. (large-flowered).

Desmodium acuminatum DC.

Meibomia grandiflora Kuntze.

Occasional or frequent. Dry rocky woods, usually in rich soil. July—Aug.

Desmodium rotundifolium (Michx.) DC. (round-leaved).

Meibomia Michauxii Vail.

Occasional or local. Dry woods and hillside thickets. July—Aug.

Desmodium glabellum (Michx.) DC.

Desmodium humifusum Beck.

Meibomia glabella Kuntze.

Rare. Waterford, in dry woods (Graves). Aug.

Desmodium canescens (L.) DC.

Meibomia canescens Kuntze.

Dry woods and sandy fields. Occasional or frequent in the southern half of the state and in the Connecticut Valley; rare or local elsewhere. July — Aug.

Desmodium bracteosum (Michx.) DC. (having conspicuous bracts).

Desmodium cuspidatum Hook.

Meibomia bracteosa Kuntze.

Dry wooded banks and in thickets. Occasional or frequent in the Connecticut Valley and in the southwestern part of the state; rare or absent elsewhere. July — Aug.

Desmodium Dillenii Darl.

Meibomia Dillenii Kuntze.

Occasional. Dry woods and thickets in either sandy or rich ground. July — Aug.

Desmodium paniculatum (L.) DC. (panicled).

Meibomia paniculata Kuntze.

Occasional or frequent. Dry woods and copses. July — Aug.

Desmodium canadense (L.) DC.

Meibomia canadensis Kuntze.

Showy Tick Trefoil.

Common. Sandy fields, roadsides and open waste places. July — Aug.

Flowers rarely pure white.

Desmodium sessilifolium (Torr.) Torr. & Gray (sessile-leaved).

Meibomia sessilifolia Kuntze.

Dry open or thinly wooded banks and sandy railroad fillings. Local or occasional in the valleys of the Thames River system: Montville, Norwich, Preston and Windham (Graves), Franklin and Bozrah (R. W. Woodward). July — Aug.

Desmodium rigidum (Ell.) DC. (stiff or rigid).

Meibomia rigida Kuntze.

Occasional or frequent. Dry banks and sandy roadsides. July — Aug.

Desmodium obtusum (Muhl.) DC. (blunt).*Desmodium ciliare* DC.*Meibomia obtusa* Vail.

Dry open ground and waste places. Occasional in the southern part of the state, becoming rare northward, reaching Glastonbury (Mrs. F. W. Starmer), and Manchester (Weatherby). July — Aug.

Desmodium marilandicum (L.) DC.*Meibomia marilandica* Kuntze.

Occasional or frequent. Dry hillsides and sandy plains. Aug. — Sept.

LESPEDEZA Michx. Bush Clover.**Lespedeza procumbens** Michx. (trailing).

Occasional. Dry woods or thickets in sandy or sterile soil. Aug. — Sept.

Lespedeza repens (L.) Bart. (creeping).

Rare. Dry woods: New Haven (R. W. Woodward). Aug. — Sept.

Lespedeza violacea (L.) Pers. (violet-colored).

Bush Clover.

Dry open woods. Occasional in most districts but not reported from New London County. Aug. — Sept.

Lespedeza Nuttallii Darl.

Rare. Dry wooded banks or in open ground, mostly in sandy soil: Lyme and Windham (Graves), Southington (Bissell), Seymour and Oxford (Harger). Aug.

Lespedeza Stuvei Nutt.

Dry woods and rocky banks. Occasional in the southwestern part of the state, becoming rare northward and eastward, reaching Southington (Andrews), Windsor (Bissell), and Waterford (Graves). Aug.

Lespedeza virginica (L.) Britton.*Lespedeza reticulata* Pers.

Rare or local. Dry sandy or rocky soil. Aug. — Sept.

Lespedeza frutescens (L.) Britton (shrubby).

Lespedeza Stuevei Nutt., var. *intermedia* Wats.

Frequent. Dry woods and sandy banks. Aug.—Sept.

Lespedeza simulata Mackenzie & Bush (imitating).

Rare. Dry sandy ground: Groton (Graves), Southington (Bissell). Aug.

Lespedeza hirta (L.) Hornem. (hairy).

Lespedeza polystachya Michx.

Occasional or frequent. Dry sandy soil. Aug.—Sept.

Lespedeza capitata Michx. (having a head, referring to the compact flower clusters).

Common. Dry fields and sandy places. Aug.

Lespedeza capitata Michx., var. *velutina* (Bicknell) Fernald (velvety).

Lespedeza velutina Bicknell.

Lespedeza Bicknellii House.

Dry sandy or sterile places. Rare or perhaps occasional growing with the typical form. Aug.

CICER L. Chick Pea.

Cicer arietinum L. (ram's-head, referring to the shape of the flowers).

Rare. One plant in waste ground: Waterbury (A. E. Blewitt). July. Fugitive from Europe.

VICIA L. Vetch. Tare.

Vicia sativa L. (sown).

Spring Vetch.

Rare. Waste ground as an escape from cultivation. June — Aug. Adventive from Europe.

Sometimes cultivated as a forage plant or for a cover-crop.

Vicia angustifolia Reichard (narrow-leaved).

Common Vetch or Tare.

Roadsides and waste ground. Rare in its typical form.

The var. *SEGETALIS* (Thuillier) Koch (of corn fields), *Vicia sativa* of Gray's Manual ed. 6, not L., is occasional or frequent near the coast, becoming rare northward. June — Aug. Naturalized from Europe.

Vicia Faba L. (classical name for this species).

European Garden Bean.

Rare. Waste or ballast ground: Southington (Bissell), Waterbury (A. E. Blewitt), Bridgeport (Eames). July—Sept. Fugitive from the Old World.

From prehistoric times has been cultivated for food. In the maritime provinces of Canada it is grown for fodder, but in most parts of the United States, where the summers are hot and dry, it does not thrive.

Vicia tetrasperma (L.) Moench (four-seeded).

Slender Vetch.

Dry grassland. Rare or local in most districts: Norwich (W. A. Setchell), Southington (Andrews), Hamden (Harger). Becoming occasional from Milford (Eames, C. K. Averill) westward along the coast. Late May—June. Naturalized from Europe.

Vicia hirsuta (L.) S. F. Gray (hairy).

Hairy Vetch or Tare.

Rare. Stamford, in waste ground (W. H. Hoyt). May—Sept. Fugitive from Europe.

Vicia Cracca L. (classical name for some leguminous plant).

Cow, Tufted or Blue Vetch.

Fields, meadows and roadsides. Frequent along the Connecticut River; rare, local or occasional elsewhere. June—Aug. For the most part introduced from the West or North or from Europe.

Inclined to be troublesome in grassland wherever established.

Vicia villosa Roth (hairy).

Hairy or Winter Vetch.

Rare. Borders of fields as an escape from cultivation: Southington (Andrews), Salisbury (M. L. Fernald). June—Sept. Adventive from the Old World.

Grown to a considerable extent as a cover-crop.

LENS Hill. Lentil.

Lens esculenta Moench (fit for eating).

Ervum Lens L.

Lentil.

Rare. Waste places: Bridgeport (Eames), Stamford (W. H. Hoyt). July — Aug. Fugitive from the Old World.

This is one of the oldest, and is still one of the important food-plants for man, especially in the warmer parts of the Old World and the Orient, although but little cultivated in this country.

LATHYRUS L. Vetchling. Everlasting Pea.

Lathyrus maritimus (L.) Bigel. (of the sea).

Beach Pea.

Common on beaches and sand dunes along the coast. June — Aug.

Is found rarely with pure white flowers. The young spring shoots make an excellent pot-herb.

Lathyrus palustris L. (of marshes), var. *linearifolius* Ser. (very narrow-leaved).

Marsh Pea.

Local. Borders of salt marshes in Groton, Waterford and Old Lyme (Graves), Old Saybrook (Harger). June — July.

Lathyrus latifolius L. (broad-leaved).

Perennial or Everlasting Pea.

Rare. Escaped from cultivation to roadsides: Groton, Norwich and Preston (Graves), Guilford (G. H. Bartlett), Southington (Bissell), Bridgeport (Eames). June — Aug. Adventive from Europe.

An old-fashioned garden flower, hardy under almost all conditions of soil and light.

Lathyrus pratensis L. (of meadows).

Yellow Vetchling.

Rare. In grassland: Hartford, well established in and near an old cemetery (H. S. Clark). July. Adventive from Europe.

PISUM L. Pea.

Pisum sativum L. (sown).

Garden Pea.

Rare. Waste places as an escape from cultivation. June — July. Fugitive from Europe.

Pisum sativum L., var. **arvense** (L.) Poir. (of fields).

Field Pea.

Rare. Waste places: Bridgeport (Eames). July. Fugitive from Europe.

Sometimes grown for forage.

APIOS Ludwig. Groundnut. Wild Bean.

Apios tuberosa Moench (bearing tubers).

Apios Apios MacM.

Groundnut. Wild Bean.

Occasional to frequent. Moist thickets and near streams.

July — Sept.

The tubers are said to be edible.

PHASEOLUS L. Kidney Bean.

Phaseolus polystachyus (L.) BSP. (many-spiked).

Phaseolus perennis Walt.

Wild Bean.

Rare. Rocky woods and dry banks: Franklin (R. W. Woodward), New Haven (D. C. Eaton, R. W. Woodward), Huntington (Harger), Norwalk (Miss M. D. Lockwood, G. P. Ells, Bissell). Aug.

Phaseolus vulgaris L. (common).

Common or Kidney Pole Bean.

Rare. Sometimes occurs as an escape in waste ground. July — Aug. Native of Central and South America. A fugitive, not persistent here.

The var. **NANUS** (L.) Taubert (dwarf), Field or Bush Bean, rarely occurs in similar situations.

STROPHOSTYLES Ell.

Strophostyles helvola (L.) Britton (yellowish).

Strophostyles angulosa Ell.

Trailing Wild Bean.

Open ground in sandy soil. Common along the coast, becoming rare or local northward. Aug. — Sept.

AMPHICARPA Ell. Hog Peanut.***Amphicarpa monoica*** (L.) Ell. (monoecious).*Falcata comosa* of American authors.

Wild or Hog Peanut.

Common. Woods and thickets, more often in rich moist soil. July — Sept.

Amphicarpa Pitcheri Torr. & Gray.*Falcata Pitcheri* Kuntze.

Hog Peanut.

Low woods and thickets. Southington (Andrews), Fairfield (Eames), Norwalk (Harger, Bissell), and probably occasional or local near the coast eastward. July — Sept.

LINACEAE. FLAX FAMILY.**LINUM** L. Flax.***Linum usitatissimum*** L. (most useful).

Common Flax. Linseed.

Rare. Roadsides, fields and waste places. June — Sept. Introduced from Europe, its nativity unknown.

Well known as a cultivated plant from time immemorial; invaluable for its fibre and oil. The fibre of the inner bark is very strong and tough, is valuable for spinning, and is used in the manufacture of fine linen threads and cloths, also a great variety of coarser cords and fabrics. The seeds are the source of linseed oil, and the residue, under the name of "oil cake," is considered a valuable food for stock. Linseed meal has important medicinal uses.

Linum sulcatum Riddell (furrowed).

Rare. Dry ground: Granby (Bissell), New Haven, Ansonia, Oxford, Southbury and Woodbury (Harger), Milford (Eames), Kent (Weatherby), Salisbury (Mrs. C. S. Phelps). July — Aug.

Linum striatum Walt. (grooved).

Occasional to frequent. Moist open or shaded places. July — Aug.

***Linum virginianum* L.**

Wild Yellow Flax.

Frequent. Dry woods and more open places, usually in sandy soil. July—Aug.

***Linum medium* (Planch.) Britton (intermediate).**

Rare. Dry, sandy fields: Waterford and Old Lyme (Graves), Ledyard (Harger), Milford (Eames). July—Sept.

OXALIDACEAE. WOOD SORREL FAMILY.**OXALIS L. Wood Sorrel.*****Oxalis Acetosella* L. (somewhat sour).**

Common or White Wood Sorrel.

Rare or local. Rich moist woods: Granby (I. Holcomb), Barkhamsted and Colebrook (Bissell), Winchester (Andrews), Norfolk (J. H. Barbour), Salisbury (Mrs. C. S. Phelps). June—July.

This and other species of the genus contain a compound of oxalic acid, and if eaten in excess may give rise to poisoning. They are somewhat medicinal.

***Oxalis violacea* L. (violet-colored).**

Violet Wood Sorrel.

Woods and moist or dry shaded places. Rare or local, but apparently well distributed throughout the state. May—June.

***Oxalis stricta* L. (straight).**

Oxalis corniculata L., var. *stricta* of Gray's Manual ed. 6 in part.

Yellow Wood Sorrel.

Fields, roadsides and sandy places. Rare or local in northern districts, becoming frequent near the coast. May—Sept.

***Oxalis filipes* Small (with thread-like stems).**

Oxalis Brittoniae Small.

Slender Yellow Wood Sorrel.

Rare or local. Dry fields and roadsides: Farmington (H. S. Clark & Bissell), Newington, Litchfield and Cornwall (Bis-

sell), Orange (Eames), Southbury (Harger), Salisbury (M. L. Fernald). May — Sept.

***Oxalis corniculata* L. (horned).**

Oxalis corniculata L., var. *stricta* of Gray's Manual ed. 6 in part.

Oxalis stricta of many authors, not L.

Oxalis Bushii Small.

Oxalis rufa Small.

Oxalis cymosa Small.

Lady's Sorrel. Tall Yellow Wood Sorrel.

Common. Woods and fields in various soils and situations.
May — Sept.

***Oxalis repens* Thunb. (creeping).**

Oxalis corniculata L. in part, and of many later authors.

Rare or local. Florist's grounds, greenhouses and street gutters: New London (Graves). May — June. A cosmopolitan species, in Connecticut probably adventive from Europe.

GERANIACEAE. GERANIUM FAMILY.

GERANIUM L. Cranesbill.

***Geranium maculatum* L. (spotted).**

Wild Cranesbill.

Common. Fields, roadsides and woods. May — June.

The very astringent root is medicinal and is officinal.

***Geranium pratense* L. (of meadows).**

Meadow Geranium or Cranesbill.

Rare. Naugatuck, in waste ground (B. B. Bristol). July.
Fugitive from Europe.

***Geranium Robertianum* L.**

Herb Robert. Red Robin.

Rocky ledges, usually in shade. Rare in eastern districts, becoming occasional or frequent westward. May — Sept.

***Geranium carolinianum* L.**

Occasional. Rocky woods, dry fields and waste ground.
May — July.

Geranium pusillum Burm. f. (very small).

Small-flowered Geranium or Cranesbill.

Rare. In lawns and grasslands: New Haven (Harger), Bridgeport (Eames), Monroe (H. C. Beardslee), Litchfield (Miss E. H. Thompson). June—July. Adventive from Europe.

Geranium dissectum L. (finely cut).

Cut-leaved Geranium or Cranesbill.

Rare. Oxford, in newly seeded ground (Harger). June. Fugitive from Europe.

Geranium molle L. (soft).

Dove's-foot Geranium or Cranesbill.

Rare. Lawns and cultivated ground: Southington (Andrews), Stratford (Mrs. R. H. Russell), Bridgeport (Eames), Litchfield (Miss E. H. Thompson). May—June. Fugitive from Europe.

ERODIUM L'Hér. Storksbill.**Erodium cicutarium** (L.) L'Hér. (like *Cicuta*, the Poison Hemlock).

Storksbill. Heron's-bill.

Rare. Waste ground: New London (Graves), Norwich (Mrs. E. E. Rogers), Glastonbury (Mrs. F. W. Starmer), Bridgeport (Miss A. E. Carpenter), Norwalk (G. P. Ells). May—June. Fugitive from Europe.

Erodium moschatum (L.) L'Hér. (smelling of musk).

Musk Erodium or Storksbill.

Rare. Hartford, in waste grounds (H. S. Clark). Sept. Fugitive from Europe.

RUTACEAE. RUE FAMILY.**ZANTHOXYLUM** L. Prickly Ash.**Zanthoxylum americanum** Mill.

Northern Prickly Ash. Prickly Ash. Toothache Tree.

Thickets, fence-rows or open fields, often in rocky ground. Rare in the southeastern part of the state, becoming occasional northward and westward and frequent in Litchfield

County. April — May. Probably southward largely an escape from cultivation.

The bark is medicinal and is officinal; the berries are also sometimes used medicinally.

PTELEA L. Shrubby Trefoil. Hop Tree.

Ptelea trifoliata L. (three-leaved).

Shrubby Trefoil. Hop Tree.

Rare. Roadsides and waste places as an escape from cultivation: Southington (Andrews), Seymour (Harger), Ansonia (C. K. Averill), Woodbury (Eames), Huntington (Eames & C. C. Godfrey), Litchfield (Miss E. H. Thompson). June. Adventive from the West.

The bark of the root, the leaves and the fruit are medicinal.

SIMARUBACEAE. QUASSIA FAMILY.

AILANTHUS Desf. Tree of Heaven.

Ailanthus glandulosa Desf. (glandular).

Ailanthus. Tree of Heaven.

Occasional. Waste places, fence-rows and along roadsides. June; fruit Oct. Naturalized from China.

A tree of rapid growth, well adapted to cultivation. It propagates freely from seed and from root suckers and readily accommodates itself to any soil. It was formerly supposed to counteract malarial influences arising from the soil in which it grew. The staminate tree, however, on account of its disagreeable odor when in flower, is not desirable. The bark is medicinal.

POLYGALACEAE. MILKWORT FAMILY.

POLYGALA L. Milkwort.

Polygala paucifolia Willd. (few-leaved).

Fringed Polygala. Flowering Wintergreen.

In woods, usually in light soil. Rare in New London County, frequent elsewhere. May — June.

A form with white flowers has been found at New Milford (C. K. Averill).

***Polygala polygama* Walt. (polygamous).**

Milkwort.

Local or occasional. Dry sandy ground, often on sand plains. July — Aug.

A form with white flowers occurs at Milford (Eames).

***Polygala Senega* L. (from Seneca Indians).**

Seneca or Senega Snakeroot.

Rare. Kent, a small colony in thinly shaded, dry and poor soil on the bank of the Housatonic River (C. K. Averill & E. H. Austin); occurs also at New Milford (C. D. Bishop). May — June.

The plant is valued medicinally and is officinal.

***Polygala sanguinea* L. (blood-red).**

Polygala viridescens L.

Purple Milkwort.

Common. Moist or sometimes dry fields, pastures and thin woods. July — Sept.

Occurs occasionally with white flowers.

***Polygala Nuttallii* Torr. & Gray.**

Rare or local. Open ground in sandy soil: Grotton (Graves), Cheshire and Southington (Andrews), Plainville (Bissell). July — Aug.

***Polygala cruciata* L. (cross-shaped).**

Open swamps and wet meadows. Occasional or frequent near the coast, but rare or wanting inland. July — Sept.

***Polygala verticillata* L. (whorled).**

Whorled *Polygala*.

Common. Dry or sterile fields. July — Aug.

***Polygala verticillata* L., var. *ambigua* (Nutt.) Wood (doubtful).**

Polygala ambigua Nutt.

Apparently rare. Dry places, growing with the typical form. The distinctions between this variety and the species have been little recognized, and its distribution is not known. July — Aug.

EUPHORBIACEAE. SPURGE FAMILY.

CROTONOPSIS Michx.

Crotonopsis linearis Michx. (very narrow; referring to the leaves).

Local. Sandy fields and wastes: Milford, plentiful in one locality (Eames). July — Sept.

ACALYPHA L. Three-seeded Mercury.

Acalypha virginica L.

Frequent or common. Open woods, fields and meadows. July — Sept.

Sometimes a weed in lawns and cultivated ground.

Acalypha gracilens Gray (slender).

Acalypha virginica L., var. *gracilens* Muell. Arg.

Frequent. Dry fields and roadsides. July — Sept.

RICINUS L. Castor-oil Plant.

Ricinus communis L. (growing in colonies).

Castor-oil Plant.

Rare. A fugitive in waste grounds in Bridgeport and Fairfield (Eames). Sept. — Oct. Native of India or Africa.

Cultivated for ornament. The oil expressed from the seeds is medicinal and is officinal.

EUPHORBIA L. Spurge.

Euphorbia polygonifolia L. (having leaves like *Polygonum*, the Knotweed).

Seaside Spurge.

Frequent along the coast on sea beaches and sand dunes. July — Sept.

Euphorbia Preslii Guss.

Euphorbia nutans of Britton's Manual.

Occasional or frequent. Fields and roadsides, especially in sandy soil. July — Sept.

The plant has medicinal properties and is locally known as Fluxweed. All species of the genus are more or less medicinal and some are strong irritants.

Euphorbia hirsuta (Torr.) Wiegand (hairy).

Frequent or common. Sandy soil along roadsides and in waste places. July — Sept.

Euphorbia maculata L. (spotted).

Milk Purslane.

Frequent. Sandy fields, roadsides and waste places. July — Sept.

Euphorbia marginata Pursh (having a distinct border).

Snow-on-the-Mountain.

Rare. Waste ground: Bridgeport (Eames). Aug. — Sept. Adventive from the West.

Often cultivated for ornament.

Euphorbia corollata L. (having a corolla).

Flowering Spurge.

Rare. Fields and waste ground: Norwich (Mrs. E. E. Rogers), Milford (Eames), Oxford (Harger). May — Aug. Adventive from the South or West.

The root is medicinal.

Euphorbia Ipecacuanhae L. (Brazilian Indian name).

Wild Ipecac. Ipecac Spurge.

Rare. There is in the Herbarium of the Boston Natural History Society a specimen of this plant collected at East Windsor by Dr. M. M. Reed. It has no date, but from what is known of Dr. Reed it must have been collected between 1825 and 1830; not otherwise reported from the state. May — Oct.

The root is medicinal. All species of spurge yield a very acrid, milky juice which is irritant to the skin. Domestic animals are sometimes poisoned by eating these plants, and the milk of such animals is also rendered poisonous.

Euphorbia Esula L. (Pre-Linnean name for certain species of spurge).

Faitour's Grass. Leafy Spurge.

Rare. Fields and waste ground: New London (Graves), Manchester (A. W. Driggs), Norwalk (G. P. Ells). May — June. Adventive from Europe.

Euphorbia Cyparissias L. (classical name for some species of spurge).

Cypress Spurge. Spurge.

Occasional. Roadsides and fields as an escape from cultivation, usually near dwellings or old cemeteries. June. Naturalized from Europe.

The plant yields a yellow dye.

Euphorbia Peplus L. (classical name for this species).

Petty Spurge.

Rare. New London, well established in one yard for at least twelve years (Graves). June—Oct. Adventive from Europe.

Euphorbia Lathyrus L. (classical name for some spurge).

Caper or Myrtle Spurge. Mole Plant.

Rare. Waste ground: well established in Trumbull and Bridgeport (Eames). July—Aug. Adventive from Europe.

CALLITRICHACEAE.

WATER STARWORT FAMILY.

CALLITRICHE L. Water Starwort.

Callitriche deflexa A. Br. (bent downward), var. **Austini** (Engelm.) Hegelm.

Callitriche Austini Engelm.

Moist shaded ground, usually in cart paths and little used roads. Local or occasional except near the coast eastward, where it is not reported. June—Aug.

Callitriche palustris L. (of marshes).

Callitriche verna L. in part.

Pools and slow running streams. Guilford (G. H. Bartlett), Windsor (Bissell), and occasional or frequent westward. June—Sept.

Callitriche heterophylla Pursh (various-leaved).

Ponds and slow running streams: Woodstock (Weatherby & Harger), East Hartford (A. W. Driggs), Southington (Andrews, Bissell), and occasional or frequent in the vicinity of the coast. June—Sept.

LIMNANTHACEAE.

FALSE MERMAID FAMILY.

FLOERKEA Willd. False Mermaid.

Floerkea proserpinacoides Willd. (like *Proserpinaca*, the Mermaid-weed).

Rare. Damp shaded ground: North Haven (A. H. Graves), Orange (Eames & C. C. Gadsfrey), Oxford (G. H. Bartlett), Southbury (Harger). May.

ANACARDIACEAE. CASHEW FAMILY.

RHUS L. Sumach.

Rhus typhina L. (like *Typha*, the Cat-tail).

Rhus hirta Sudworth.

Staghorn Sumach.

Occasional. Open fields, thickets and fence-rows. June.

The bark and berries have properties similar to those of *Rhus glabra*.

Rhus glabra L. (smooth).

Smooth Sumach.

Frequent or common. Pastures and roadsides, usually in dry ground. June.

Sometimes forms troublesome colonies by its running root-stocks. The leaves and bark are sometimes used in tanning. Galls found on its leaves are very astringent and are used as a substitute for the imported galls. All species of the genus are handsome, especially in their autumnal foliage, and the innocuous species are particularly ornamental when grown in suitable places.

Rhus copallina L. (producing copal).

Dwarf, Black or Shining Sumach.

Occasional, frequent or common. Pastures and rocky woods. July—Aug.

The bark and leaves have properties similar to those of *Rhus glabra*.

Rhus Vernix L. (varnish).

Rhus venenata DC.

Poison Sumach, Dogwood or Elder.

Swamps and wet ground or sometimes in drier places. Occasional in most districts, becoming frequent near the coast. June—July.

All parts of the plant are poisonous to the touch, etc., as in the following species, only more actively so.

Rhus Toxicodendron L. (poison tree).

Poison Ivy, Oak or Vine. Mercury. Marcury.

Frequent or common. Fence-rows, fields, woods and meadows, in either moist or dry ground, often climbing trees and posts. May—June.

The var. *RADICANS* (L.) Torr. (rooting), *Rhus radicans* L., is often more plentiful than the typical form.

A pernicious shrub or vine that is far too plentiful. To most persons all parts of the plant at all seasons are poisonous to the touch; and its exhalations, even at some distance, are equally poisonous to some, especially in a humid atmosphere or during free perspiration. The poisonous principle is believed to be a peculiar oil which is present in all parts of the plant and which in the minutest quantity is intensely irritant. Cattle and horses are not affected by it. The leaves are valued medicinally and were formerly officinal.

Rhus canadensis Marsh.

Rhus aromatica Ait.

Sweet-scented Sumach.

Rare. Guilford, on a small outcrop of rock in a salt marsh (G. H. Bartlett). May.

The bark of the root is an active medicinal agent.

AQUIFOLIACEAE. HOLLY FAMILY.

ILEX L. Holly.

Ilex opaca Ait. (opaque).

American Holly.

Rare. Roadsides and thickets: Waterford (Miss A. H. Morgan), Milford (J. D. Dana), Wolcott (H. J. Bassett). May—June; fruit Oct., lasting into the winter. Escaped from cultivation or possibly native.

Plentiful in parts of the South, where it is extensively

gathered for use in Christmas decorations. The leaves and bark are medicinal.

***Ilex verticillata* (L.) Gray (whorled).**

Black Alder. Winterberry.

Common. Moist woods and swamps, or sometimes in drier places. June—July.

The berries turn brilliant red in autumn and continue on the bushes far into the winter. The bark and berries are used medicinally.

***Ilex verticillata* (L.) Gray, var. *tenuifolia* (Torr.) Wats. (thin-leaved).**

Ilex bronxensis Britton.

Winterberry.

Low grounds, growing with the species. Frequent in southwestern Connecticut (Eames); occasional about New London (Graves). Rare elsewhere: Southington (Andrews), Litchfield (Bissell). June—July.

***Ilex verticillata* (L.) Gray, var. *padifolia* (Willd.) Torr. & Gray (having leaves like *Padus*, the Cherry).**

Winterberry.

Occasional. Low woods and swamps, growing with the species. June—July.

***Ilex laevigata* (Pursh) Gray (smoothed).**

Smooth Winterberry.

Swamps and wet woods. Rare in the northern and western parts of the state: South Windsor and Litchfield (Bissell), Monroe and Middlebury (Harger), Salisbury (Mrs. C. S. Phelps). Occasional in southeastern Connecticut, chiefly in White Cedar swamps (Graves). June; fruit Sept.

***Ilex glabra* (L.) Gray (smooth).**

Inkberry.

Local. In and about swamps: Voluntown (Harger), Groton, New London and Waterford (Graves), Guilford (W. R. Dudley). June.

NEMOPANTHUS Raf. Mountain Holly.

***Nemopanthus mucronata* (L.) Trel. (having a short abrupt point).**

Nemopanthes fascicularis Raf.

Illicioides mucronata Britton.

Mountain Holly.

Low woods and shaded swamps. Rare near the coast, becoming occasional or frequent northward. May.

CELASTRACEAE. STAFF TREE FAMILY.

EVONYMUS L. Spindle Tree.

Evonymus atropurpureus Jacq. (dark purple).

Burning Bush. Waahoo. Indian Arrow-wood.

Rare. Escaped from cultivation to roadsides and fence-rows: Southington (Weatherby & Bissell), Milford (Eames & C. C. Godfrey), Stratford, Bridgeport and Easton (Eames). June—July; fruit Sept.—Oct. Adventive or fugitive from the West.

Planted for ornament. The bark of the root is medicinal and is officinal.

Evonymus alatus (Thunb.) Rupr. & Maxim. (winged).

Rare. Escaped from cultivation to roadsides: Plainfield (Weatherby & Bissell), Milford (Eames), Oxford, Huntington and Monroe (Harger). June—July. Adventive from eastern Asia.

Planted for ornament.

Evonymus europaeus L.

European Spindle Tree.

Rare. Escaped from cultivation to roadside in Stratford (Eames), and Bridgeport (Miss A. E. Carpenter). June—July. Adventive from Europe.

Planted for ornament.

CELASTRUS L. Staff Tree. Shrubby Bitter-sweet.

Celastrus scandens L. (climbing).

Waxwork. Climbing Bitter-sweet.

Frequent. Thickets, fence-rows and along streams. May—June; fruit Sept.—Oct., persisting into the winter.

The dried pods are often gathered for home decorations. A highly ornamental plant and worthy of cultivation. The bark of the plant and root are medicinal.

STAPHYLEACEAE. BLADDER NUT FAMILY.**STAPHYLEA L. Bladder Nut.*****Staphylea trifolia* L. (three-leaved).**

American Bladder Nut.

Rocky woods and thickets. Rare in New London County, occasional elsewhere. Late May; fruit Aug.—Sept.

Desirable to plant as an ornamental shrub.

ACERACEAE. MAPLE FAMILY.**ACER L. Maple.*****Acer pennsylvanicum* L.**

Striped Maple. Moosewood.

Rocky woods in rich soil. Occasional in the northwestern part of the state, becoming rare eastward and southward, reaching Ashford (Bissell), East Haddam (Graves), Huntington and Redding (Eames). May.

An attractive tree at all seasons of the year.

***Acer Pseudo-platanus* L. (simulating *Platanus*, the Plane Tree).**

Sycamore Maple.

Rare. Sparingly escaped from an old nursery to a pasture at Wethersfield (H. S. Clark & Bissell). May. Introduced from Europe.

Sometimes planted as an ornamental tree.

***Acer spicatum* Lam. (spiked).**

Mountain Maple.

Cool, rocky woods. Occasional in the northern part of the state, becoming rare southward, reaching East Haddam (Graves), Guilford, at Bluff Head (G. H. Bartlett), Meriden (D. C. Eaton), Redding (Eames & C. C. Godfrey). May.

***Acer saccharum* Marsh. (sugar).**

Acer saccharinum Wang., not L.

Sugar or Rock Maple.

Rocky woods, roadsides and fence-rows. Frequent or common in northern districts, becoming rare near the coast, except as an escape from cultivation. May.

A popular shade tree, very common in cultivation. Very valuable for its wood, which is extensively used in cabinet work, for floors and for fuel. "Bird's-eye Maple" is of this species. It is also the source of genuine maple sugar. The autumnal foliage is very brilliant.

Acer saccharum Marsh., var. **nigrum** (Michx. f.) Britton (black).

Acer saccharinum Wang., var. *nigrum* of Gray's Manual ed. 6.

Acer nigrum Michx. f.

Black Sugar Maple.

Rare. Roadside as an escape from cultivation: Salisbury (Mrs. C. S. Phelps). May. Adventive from the North or West.

Acer platanoides L. (like *Platanus*, the Plane Tree).

Norway Maple.

Rare. Escaped from cultivation to roadside thickets in Hartford (H. S. Clark & Bissell). May. Adventive from Europe.

Frequent and well known in cultivation.

Acer saccharinum L. (sugary).

Acer dasycarpum Ehrh.

White, Silver or Soft Maple.

River banks and swamps. Frequent inland along the larger streams; rare elsewhere. March—April, rarely earlier.

Often planted for shade or ornament.

Acer rubrum L. (red).

Red, Swamp or Soft Maple.

Common. Swamps, low woods or sometimes in dry ground. March—April.

The wood is largely used in the manufacture of furniture and wooden ware and for fuel. A beautiful tree at all seasons and one of the most brilliant in spring and fall; it is worthy of much more extensive cultivation. The bark is medicinal.

Acer Negundo L. (an Indian name).

Negundo aceroides Moench.

Box Elder. Ash-leaved Maple.

Rare or local. River banks or roadsides. Apparently native along the Housatonic River from Oxford (Harger) to Salisbury (Mrs. C. S. Phelps); escaped from cultivation at Putnam (Harger), Groton (Graves), Southington (Andrews), Wethersfield (Bissell), and Norwalk (Miss A. E. Carpenter). April — May.

It is a rapid grower, thriving best in moist ground. Often planted as a shade tree and in the West grown for wind-breaks.

SAPINDACEAE. SOAPBERRY FAMILY.

CARDIOSPERMUM L.

Cardiospermum Halicacabum L. (classical name).

Balloon Vine. Heart-seed.

Rare. Escaped from gardens to waste ground in Bridgeport (Eames). Oct. Fugitive from the Tropics.

AESCULUS L. Horse-chestnut. Buckeye.

Aesculus Hippocastanum L. (horse-chestnut).

Common Horse-chestnut.

Rare. Southington, escaped from cultivation to a fence-row (Andrews). June. Native of Asia.

Extensively planted for shade or ornament.

BALSAMINACEAE. TOUCH-ME-NOT FAMILY.

IMPATIENS L. Balsam. Jewelweed.

Impatiens pallida Nutt. (pale).

Impatiens aurea Muhl. (?)

Pale Touch-me-not.

Damp, rocky woods. Rare in most districts, becoming occasional in the northwestern part of the state. July — Sept.

The herb possesses the same properties as the following species.

Impatiens biflora Walt. (two-flowered).

Impatiens fulva Nutt.

Spotted Touch-me-not. Snap-weed. Silver Weed.

Common. Moist or wet, mostly shaded places. July — Sept.

A form with pale yellow flowers occurs at Thompson (Weatherby & Bissell).

The plant bears cleistogamous fertile flowers in the earlier stages of its growth. Medicinal; it is said also to be efficacious in relieving the effects of poisoning by species of *Rhus* and stinging nettles.

RHAMNACEAE. BUCKTHORN FAMILY.

RHAMNUS L. Buckthorn.

***Rhamnus alnifolia* L'Hér.** (alder-leaved).

Dwarf Alder.

Rare or local. In swamps: Litchfield (Weatherby & Bissell), Cornwall (E. E. Brewster), Norfolk (Bissell), Salisbury (M. L. Fernald), East Granby (Harger). May.

***Rhamnus cathartica* L.** (cathartic).

Common Buckthorn.

Rare or local. Escaped from cultivation to roadsides and pastures: Stonington, Lebanon, Woodstock and Stafford (Graves), Norwich (Mrs. E. E. Rogers), Middletown (J. D. Cochrane), East Hartford (C. C. Hanmer), Waterbury (A. E. Blewitt), New Milford and Kent (C. K. Averill), Cornwall and Norfolk (Bissell), Salisbury (Mrs. C. S. Phelps). May — June. Naturalized from Europe.

A good hedge plant. The berries and bark are actively cathartic. Another species of this genus, *Rhamnus Purshiana* DC. of western North America, furnishes the well known *Cascara sagrada*.

CEANOTHUS L. Red-root.

***Ceanothus americanus* L.**

New Jersey Tea. Red-root.

Common. Dry, open woods and fields in sterile soil. June — July.

The leaves are said to have been used during the American revolution as a substitute for tea. The root and leaves were formerly used for dying wool red. Medicinal.

VITACEAE. VINE FAMILY.

PSEDERA Neck. Virginia Creeper. Woodbine.

Psedera quinquefolia (L.) Greene (five-leaved).

Ampelopsis quinquefolia Michx.

Parthenocissus quinquefolia Planch.

Woodbine. American Ivy.

Frequent or common. Woods, thickets and fence-rows.
June.

Often cultivated, and very attractive as an ornamental plant, especially in autumnal foliage. The bark and young twigs have medicinal properties.

Psedera quinquefolia (L.) Greene, var. *hirsuta* (Donn) Rehder (hairy).

Woods and thickets. Occasional or frequent in Litchfield County, not reported elsewhere. June.

Psedera vitacea (Knerr) Greene (like *Vitis*, the Grape).
Woodbine.

Woods and thickets. Apparently occurs in most parts of the state, but its exact distribution and frequency are not known. June.

VITIS L. Grape.

Vitis labrusca L. (classical name).

Northern Fox Grape. Fox or Skunk Grape.

Frequent or common. Woods, swamps and thickets.
June; fruit mid-Aug.—Sept.

The fruit is often gathered for making jelly and preserves. The cultivated Isabella, Catawba, Concord and Brighton grapes are derived from this species, and it is the parent of the greater part of American cultivated grapes. Rarely occurs with fruit amber-green or reddish brown in color. The Niagara and some other so-called White Grapes are derivatives of this form.

Vitis aestivalis Michx. (belonging to summer).

Summer, Pigeon or Bunch Grape.

Frequent or common. Woods and thickets. June; fruit
Sept.—Oct.

Hybridizes to some extent with *Vitis labrusca* and is next

in importance to that species as a source of cultivated varieties. Its derivatives are largely wine grapes.

Vitis bicolor Le Conte (two-colored).

Summer or Blue Grape.

Rare. In thickets: Southington and Colebrook (Bissell).
June; fruit Sept.—Oct.

Vitis vulpina L. (pertaining to a fox).

Vitis riparia Michx.

River-bank or Frost Grape.

Frequent on banks of rivers and streams; rare or occasional in other situations. June; fruit Sept.—Oct.

The leaves, tendrils and fruit are somewhat medicinal, as are those of other species of the genus.

TILIACEAE. LINDEN FAMILY.

TILIA L. Linden. Basswood.

Tilia americana L.

Basswood. American Linden. Whitewood.

Occasional. Woods, fence-rows and fields. June—July.

The wood is light, white and soft, but is durable, and well adapted for carriage bodies, cabinet work, interior finish of houses, and light boxes, such as honey boxes. It also makes a fine grade of charcoal. The fibrous inner bark is made into mats and cordage. It is an important honey plant and the saps yields sugar. The flowers and bark are sometimes used medicinally.

Tilia Michauxii Nutt.

Tilia pubescens of Gray's Manual, ed. 6, not Ait.

Basswood.

Rare. Wooded hillsides: Ledyard (Graves), Franklin (Graves, R. W. Woodward), Old Lyme (Miss A. M. Ryon).
Late June—early July.

Tilia vulgaris Hayne (common).

European Linden.

Rare. Escaped from cultivation to roadsides in Hartford (H. S. Clark & Bissell). June. Introduced from Europe.

This is the species so much esteemed for street decoration in Berlin.

MALVACEAE. MALLOW FAMILY.

ABUTILON Mill. Indian Mallow.

Abutilon Theophrasti Medic.*Abutilon Avicennae* Gaertn.*Abutilon Abutilon* Rusby.

Velvet Leaf.

Occasional. Waste places and roadsides. Aug.—Sept.
Naturalized from Asia.**Abutilon pictum** (Gill.) Walp. (painted).*Abutilon striatum* Dicks.

Flowering Maple. Tassel Tree.

Rare. Salisbury, a few plants in waste ground as an escape
from cultivation (H. S. Clark). June — Aug. Fugitive from
Brazil.

SIDA L.

Sida spinosa L. (spiny).Rare. Bridgeport, several plants in a dry sandy waste
(Eames). Sept. Fugitive from the Tropics.

ALTHAEA L. Marsh Mallow.

Althaea officinalis L. (of the shops).

Marsh Mallow. Sweatweed. Mortification Root.

Rare. Borders of marshes: Norwich (Mrs. E. E. Rogers),
Guilford (G. H. Bartlett & Bissell). July — Aug. Natural-
ized from Europe.The root, the leaves and the flowers are medicinal, the first
named officinal. The root is very mucilaginous and is used
in the manufacture of confectionery.**Althaea rosea** (L.) Cav. (rose-colored).

Hollyhock.

Rare. Waste places and street gutters as an escape from
gardens: New London (Graves), Hartford (H. S. Clark &
Bissell), New Britain (J. N. Bishop), Meriden (Andrews),
Bridgeport and Fairfield (Eames). July — Aug. Adventive
from southern Europe.

An old and deservedly popular garden plant.

MALVA L. Mallow.**Malva rotundifolia L. (round-leaved).**

Common or Dwarf Mallow. Cheeses.

Common. Waste places and cultivated fields. May — Oct.
Naturalized from Europe.

Sometimes troublesome as a weed. The plant is medicinal,
and like most species of this family abounds in mucilage.

Malva crispa L. (curled).

Curled Mallow.

Rare. Escaped from gardens to cultivated ground: East
Lyme (Miss A. M. Ryon), Oxford (Harger). June — Aug.
Adventive from Europe.

Malva sylvestris L. (of woods).

High Mallow.

Rare or local. Roadsides and waste ground: Norwich
(Mrs. E. E. Rogers), East Lyme (Miss A. M. Ryon), New
Haven (O. D. Allen), Southington (Bissell), Oxford (Har-
ger), Bridgeport (Eames), Litchfield (Miss E. H. Thomp-
son). Aug.—Sept. Adventive from Europe.

The plant is medicinal.

Malva moschata L. (musky).

Musk Mallow or Rose.

Rare, but found throughout the state. Escaped from
gardens to roadsides and waste ground. June — Aug. Ad-
ventive from Europe.

Malva Alcea L. (classical name for some mallow).

European Mallow.

Rare. Roadsides and waste ground as an escape from
gardens: Griswold and East Lyme (Graves), Stafford and
Southington (Bissell), East Granby (H. S. Clark), Trumbull
(J. P. Coles), Weston (Eames & C. C. Godfrey), Salisbury
(Mrs. C. S. Phelps). June — Sept. Adventive from Europe.

HIBISCUS L. Rose Mallow.**Hibiscus syriacus L.**

Rose of Sharon. Shrubby Althaea.

Rare. Meriden, ballast ground (Andrews), Fairfield,

freely escaped to a shrubby hillside (Eames), Salisbury (C. C. Godfrey). Aug. Naturalized from Asia.

Hibiscus Moscheutos L. (producing offsets).

Wild or Swamp Rose Mallow.

Frequent along the coast in brackish and saline marshes; rare inland as at Woodbury (Harger). Aug.—Sept.

The root is sometimes used medicinally. Will thrive in any garden soil and is well worthy of cultivation.

Hibiscus Trionum L.

Bladder Ketmia. Flower-of-an-Hour.

About old gardens and in waste places as an escape from cultivation. Rare in most districts: Ledyard (Graves), Guilford (G. H. Bartlett), East Windsor (Bissell), Southington (Andrews). Occasional in the southwestern part of the state. July — Aug. Adventive from Europe.

Hibiscus esculentus L. (edible).

Okra. Gumbo.

Rare. Waste ground in Fairfield (Eames). Aug.—Sept. Fugitive from tropical Asia.

Much cultivated in the South for its young pods which are added to soups and stews. It can be grown successfully in southern Connecticut.

HYPERICACEAE. ST. JOHN'S-WORT FAMILY.

HYPERICUM L. St. John's-Wort.

Hypericum Ascyron L. (classical name for some species of St. John's-wort).

Great St. John's-wort.

Alluvial soil on banks of streams. Rare in most districts: Wethersfield and Simsbury (A. W. Driggs), Southington (Andrews). Occasional along the Housatonic River throughout its course. July — Aug.

Hypericum perforatum L. (perforated).

Common St. John's-wort.

Common. Waste places, open fields and roadsides. May — June. Naturalized from Europe.

The herb is medicinal and is used as a substitute for Arnica.

Hypericum punctatum Lam. (dotted).

Hypericum maculatum Walt., not Crantz.

Hypericum corymbosum Muhl.

Hypericum maculatum Walt., var. *subpetiolatum* Bicknell.

Frequent. Moist ground. July — Aug.

Hypericum prolificum L. (prolific; fertile).

Shrubby St. John's-wort.

Rare. Escaped from cultivation to fields and roadsides: Woodstock (Graves & Harger), Salisbury (Mrs. C. S. Phelps). June — Aug. Adventive from the South.

Hypericum adpressum Bart. (appressed).

Rare. Wet shores: Lisbon (W. A. Setchell & Graves), Lebanon (Mrs. C. B. Graves), East Lyme (Miss A. M. Ryon). June — July.

Hypericum Bissellii Robinson.

Rare. Open rocky woods: Southington (Bissell). July — Aug.

Hypericum ellipticum Hook. (oval).

Pale St. John's-wort.

Common. Moist places and along streams. Late June — July.

Hypericum boreale (Britton) Bicknell (northern).

Hypericum canadense L., var. *minimum* Gray's Manual ed. 6.

Wet or moist sandy soil. Probably occasional or frequent throughout but its exact distribution is not known. July — Sept.

Hypericum mutilum L. (mutilated).

Dwarf St. John's-wort.

Common. Moist or wet sandy ground along streams and in ditches and about ponds. July — Sept.

Hypericum majus (Gray) Britton (larger).

Hypericum canadense L., var. *majus* Gray.

Moist sandy ground, usually along streams. Rare or local in most parts of the state: Groton (Graves), Union (Bissell), Southington (Andrews, Bissell). Occasional along the Connecticut River and in parts of New Haven and Fairfield Counties. July — Aug.

Hypericum canadense L.

Common. Sandy ground, usually in moist or wet but sometimes in dry places. July — Sept.

Hypericum gentianoides (L.) BSP. (gentian-like).

Hypericum nudicaule Walt.

Sarothra gentianoides L.

Orange Grass. Pineweed.

Common. Dry sandy or rocky ground, often plentiful on sand plains. Aug. — Sept.

Hypericum virginicum L.

Triadenum virginicum Raf.

Elodea campanulata Pursh.

Marsh St. John's-wort.

Frequent. Swamps and in shallow water. July — Sept.

ELATINACEAE. WATERWORT FAMILY.**ELATINE** L. Waterwort.**Elatine americana** (Pursh) Arn.

Mud Purslane.

Muddy shores and in shallow water. Rare or local in most districts: Norwich (Mrs. E. E. Rogers), Groton, Lyme and Old Lyme (Graves), Guilford (G. H. Bartlett), Southington (Andrews & Bissell), Middlebury (Harger), Kent (Eames & E. H. Austin). Local or occasional in southwestern Connecticut. July — Aug.

CISTACEAE. ROCKROSE FAMILY.**HELIANTHEMUM** Mill. Rockrose.**Helianthemum canadense** (L.?) Michx.

Frostweed.

Frequent. Dry sandy or gravelly places. Mid-May — July.

The plant is medicinal.

Helianthemum majus BSP. (larger).

Frostweed.

Frequent. Dry open ground in sandy or gravelly soil. June — July.

HUDSONIA L.

Hudsonia tomentosa Nutt. (woolly).

False Heather. Poverty Grass.

Rare, occasional or local on sand dunes along the coast from Groton (Graves), westward as far as Westport (Eames & C. C. Godfrey); occurs also inland at Ledyard (Graves). Late May—June.

LECHEA L. Pinweed.

Lechea villosa Ell. (hairy).

Lechea major Michx., not L.

Hairy Pinweed.

Common. Roadsides, fields and waste ground in sterile soil. July—Aug.

Lechea minor L. (smaller).

Lechea thymifolia Michx.

Rare or local. Dry open ground or in half-shade: New London and East Lyme (Graves), Middletown and Enfield (Bissell), Southington (Andrews), Kent (Eames), Salisbury (Mrs. C. S. Phelps). July—Aug.

Lechea intermedia Leggett (intermediate).

Lechea minor Gray's Manual ed. 6.

Open ground or thin woods in sterile soil. Rare near the coast, becoming frequent or common northward. July—Aug.

Lechea maritima Leggett (of the seaside).

Lechea minor L., var. *maritima* Gray.

Beach Pinweed.

Frequent on sandy beaches and dunes along the coast. July—Aug.

Lechea maritima Leggett, var. *interior* Robinson (inland).

Dry sandy or sterile soil. Rare or occasional in the southeastern part of the state, extending to Sterling (Graves), East Hartford (Weatherby), and Southington (Andrews). July—Aug.

Lechea tenuifolia Michx. (fine-leaved).

Frequent. Dry sandy or sterile ground. July—Aug.

***Lechea Leggettii* Britton & Hollick.**

Lechea moniliformis Bicknell.

Dry or sandy places. Occasional or local in New London County (Graves); not reported elsewhere. July — Aug.

VIOLACEAE. VIOLET FAMILY.**VIOLA L. Violet. Heart's-ease.**

***Viola pedata* L.** (like a bird's foot; referring to the form of the leaves).

Viola pedata L., var. *bicolor* Pursh.

Bird-foot Violet.

Dry sandy or rocky ground. Rare in its typical form: New Milford (Miss S. Hartwell), Branford (Miss R. Doolittle), and rarely near the coast eastward (Graves).

The var. *LINEARILOBA* DC. (very narrow-lobed), *Viola pedata* of Gray's Manual ed. 6, not L., is frequent in most parts of the state and is sometimes common on sandy plains. May and sometimes again in Sept.

Occasionally occurs with white or pink flowers.

***Viola cucullata* Ait.** (hooded).

Viola palmata L., var. *cucullata* Gray in part.

Marsh Blue Violet.

Frequent or common. Wet meadows, swamps and banks of streams. May — June.

Sometimes occurs with white, pale or variegated flowers.

A hybrid with *Viola fimbriatula* is frequent; a hybrid with *Viola palmata* occurs at East Lyme (Miss A. M. Ryon); hybrids with *Viola papilionacea* and *Viola sororia* are occasional; a hybrid with *Viola Brittoniana* occurs locally along the coast westward (Eames); a hybrid with *Viola septentrionalis* occurs at Killingly (Weatherby & Bissell); a hybrid with *Viola sagittata* occurs at Windsor (Bissell) and Fairfield (Eames).

This and the twelve species immediately following constitute a group of closely related species that hybridize freely when growing together. These hybrids show characters more or less intermediate between those of the parents, and many of

them have been described as species. They are often plentiful locally and vigorous in growth, but show impaired fertility, a large proportion of the ovules never forming seeds.

Viola nephrophylla Greene (kidney-leaved).

Viola vagula Greene.

Rare. Rich humus about a cold spring on a wooded hillside, Salisbury (Mrs. C. S. Phelps & Bissell), New Milford, moist ledges on river bank (Bissell). May.

Viola affinis Le Conte (related).

Viola venustula Greene.

Viola obliqua of Britton's Manual.

Rich woods and thickets, mostly in alluvial soil. East Lyme (Miss A. M. Ryon), Windsor (Weatherby), Plainville (Andrews), Southington (Bissell), and occasional along the Housatonic River in the northwestern part of the state. May—June.

Viola latiuscula Greene (somewhat broad).

Rare. Rich woods or moist grassland: Southington and Cornwall (Bissell). May.

Viola papilionacea Pursh (butterfly-like).

Viola palmata L., var. *cucullata* Gray in part.

Common. Meadows, pastures and open places. May—June.

A hybrid with *Viola sagittata* occurs at Glastonbury (Bissell); a hybrid with *Viola sororia* is occasional throughout.

Sometimes found with pure white flowers, or white flecked with blue.

Viola palmata L. (palmate).

Dry woods. Rare in New London County: Ledyard (Graves), East Lyme (Miss A. M. Ryon). Occasional elsewhere. May—June.

A hybrid of this with *Viola papilionacea* is sometimes found.

Viola triloba Schwein. (three-lobed).

Viola palmata L., var. *dilatata* Pollard, not Ell.

Occasional. Rich woods either dry or moist. May—June.

Viola sororia Willd. (sisterly).*Viola palmata* L., var. *sororia* Pollard.

Woolly Blue Violet.

Occasional or frequent. Woods and dry open ground.

May—June.

Viola septentrionalis Greene (northern).

Rare. Roadsides and shaded banks: Union, East Windsor, Plainville, New Hartford and Winchester (Bissell). May—June.

Viola fimbriatula J. E. Smith (finely fringed).*Viola sagittata* Gray's Manual ed. 6 in part.*Viola ovata* Nutt.

Common. Dry fields and woods. April—May.

Hybrids of this with *Viola palmata*, *Viola papilionacea*, *Viola sagittata* and *Viola sororia* are occasional. A hybrid with *Viola Brittoniana* is reported from Southington (Andrews), and occurs at Fairfield (Eames).

Rarely seen with white flowers.

Viola sagittata Ait. (arrow-head shaped).*Viola subsagittata* Green.

Moist or dry sandy or heavy soils. Generally rare: East Lyme (Miss A. M. Ryon), Glastonbury, Windsor and Bloomfield (Bissell), Plainville and Southington (Andrews). Occasional along the coast in Fairfield County (Eames). May—June.

A hybrid of this with *Viola Brittoniana* is reported from Southington (Andrews), and occurs along the coast in Fairfield County (Eames).**Viola Brittoniana** Pollard.*Viola septemloba* of authors, not LeConte.*Viola atlantica* Britton, not Pomel.

Meadows or sometimes dry open places. Occasional or local along the coast from New Haven westward (Eames). May—June.

Viola pectinata Bicknell (comb-like).

Rare. Stratford, inner edge of salt meadows (C. C. Godfrey). May—June.

A hybrid of this with *Viola Brittoniana* occurs at Stratford (Eames).

***Viola lanceolata* L. (lance-shaped).**

Lance-leaved Violet.

Low meadows, swamps and wet places about ponds. Rare or occasional in Litchfield County but frequent or common elsewhere. May—June.

***Viola primulifolia* L. (primrose-leaved).**

Primrose-leaved Violet.

Moist sandy woods, meadows and open swamps. Occasional over most of the state but not reported from Litchfield County. May—June.

***Viola pallens* (Banks) Brainerd (pale).**

Viola blanda of recent American authors, not Willd.

Sweet White Violet.

Common. Moist or wet fields and woods or in swamps. May—June.

***Viola blanda* Willd. (mild).**

Viola amoena LeConte.

Viola blanda Willd., var. *palustriformis* Gray.

Occasional or frequent. Moist or wet woods in rich soil. May—June.

***Viola incognita* Brainerd (unknown).**

Rare. Deep moist or wet woods: North Canaan (Bissell), Salisbury (Mrs. C. S. Phelps, Weatherby), Colebrook (Weatherby). May.

***Viola rotundifolia* Michx. (round-leaved).**

Early Yellow Violet. Round-leaved Violet.

Damp woods and cool shaded banks. Rare or local in New London County: Waterford and Franklin (Graves), Norwich (Mrs. E. E. Rogers). Becoming occasional or frequent northward and westward. April—May.

***Viola odorata* L. (fragrant).**

English or Sweet Violet.

Rare. About gardens as an escape from cultivation: New London (Graves), Norwich (Mrs. E. E. Rogers), East Wind-

sor (Bissell), Southington (Andrews), Waterbury (A. E. Blewitt), Oxford (Harger), Bridgeport (Miss A. E. Carpenter): April—May. Adventive from Europe.

The herb and the flowers are medicinal.

Viola pubescens Ait. (downy).

Downy Yellow Violet.

Occasional or frequent. Rich woods. May—June.

Viola scabriuscula Schwein. (slightly rough).

Viola pubescens Ait., var. *scabriuscula* Torr. & Gray.

Smooth Yellow Violet.

Rare or occasional. Rich woods usually in moist soil.

Late April—May.

Viola canadensis L.

Canada Violet.

Rare. Rocky woods in moist rich soil: New Haven, station now obliterated (H. W. Bailey), Guilford (W. R. Dudley), Torrington (Miss B. A. Parker), Colebrook (H. C. Beardslee). May—July.

Viola conspersa Reichenb. (sprinkled).

Viola canina L., var. *Muhlenbergii* Gray.

Viola labradorica of recent American authors, not Schrank.

Viola Muhlenbergii Torr.

Dog Violet.

Frequent. Moist or dry woods and fields. May—June.

Viola rostrata Pursh (beaked).

Long-spurred Violet.

Rich woods. Guilford (G. H. Bartlett), Meriden (D. C. Eaton), Wilton (G. P. Ells); becoming occasional northward in western Connecticut. May.

Viola tricolor L. (three-color).

Heart's-ease. Johnny-jump-up. Pansy.

Rare or occasional. An escape about old gardens. May—July. Introduced from Europe.

One of the oldest of garden flowers, of which the modern Pansy is an improved form.

Viola arvensis Murr. (of cultivated land).

Field or Wild Pansy.

Rare. Cultivated ground, meadows and waste places: Southington (Mrs. J. Dunham), Oxford (Harger), Bridgeport (Eames). May — Oct. Adventive from Europe.

CACTACEAE. CACTUS FAMILY.

OPUNTIA Mill. Prickly Pear. Indian Fig.

Opuntia vulgaris Mill. (common).

Opuntia Opuntia Coult.

Prickly Pear. Indian Fig.

Exposed rocks and in sandy soils. Occasional along the coast; rare inland, reaching Scotland (G. Waldo), Guilford, at North Guilford (G. H. Bartlett), Naugatuck and Beacon Falls (J. K. Goodrich), Seymour and Oxford (Harger). June — July.

THYMELAEACEAE. MEZEREUM FAMILY.

DIRCA L. Leatherwood. Moosewood.

Dirca palustris L. (of marshes).

Wicopy. Leatherwood. Moosewood.

Damp rich woods. Rare near the coast and in eastern Connecticut: Scotland (G. Waldo), Guilford (G. H. Bartlett), Orange (Harger), Bridgeport (Eames). Becoming occasional northward and westward. April — May.

The bark is very tough and was formerly used by the Indians for thongs. Medicinal.

LYTHRACEAE. LOOSESTRIFE FAMILY.

ROOTALA L.

Rotala ramosior (L.) Koehne (very branching).

Rare or local. Moist meadows and shores of ponds: Griswold (Harger & Graves), Stratford, Milford and Bridgeport (Eames). July — Sept.

DECODON J. F. Gmel. Swamp Loosestrife.

Decodon verticillatus (L.) Ell. (whorled).

Water Willow. Swamp Loosestrife.

Local or frequent. Shallow water of swamps or edges

of ponds and streams, sometimes plentifully bordering such places. July — Sept.

A form with double flowers occurs at Plainville (J. N. Bishop).

LYTHRUM L. Loosestrife.

***Lythrum alatum* Pursh** (winged).

Rare or local. Moist fields and open swamps: Norwich (Mrs. E. E. Rogers), Farmington (A. W. Driggs & Weatherby), Fairfield (Eames), Orange and Norfolk (Bissell), Salisbury (Mrs. C. S. Phelps). June — Aug.

***Lythrum Salicaria* L.** (willow-like).

Spiked or Purple Loosestrife.

Rare or local. River banks and moist meadows: East Haddam (Dr. E. J. Thompson), Southington (Andrews, Bissell), Bristol (D. C. Eaton), Fairfield (Eames), Woodbury (H. S. Clark & Bissell), Litchfield (Miss E. H. Thompson), Danbury (C. K. Averill), New Milford (E. H. Austin), Salisbury (Mrs. C. S. Phelps). July — Aug. Naturalized from Europe.

CUPHEA P. Br.

***Cuphea petiolata* (L.) Koehne** (having leaf-stalks).

Cuphea viscosissima Jacq.

Parsonsia petiolata Rusby.

Clammy Cuphea.

Moist or dry open ground and pastures. Rare in most districts: Groton (Harger & Graves), Guilford (G. H. Bartlett & Bissell), East Hartford (A. W. Driggs & Weatherby), Wallingford and Oxford (Harger), Plainville (J. N. Bishop), Danbury (Miss G. L. Northrop). Local throughout southwestern Connecticut (Eames). Aug. — Sept.

MELASTOMACEAE. MELASTOMA FAMILY.

RHEXIA L. Deergrass. Meadow Beauty.

***Rhexia virginica* L.**

Meadow Beauty.

Low fields and meadows. Rare or absent in northwestern Connecticut, becoming occasional eastward and southward and frequent in the vicinity of the coast. July — Sept.

ONAGRACEAE. EVENING PRIMROSE FAMILY.

LUDVIGIA L. False Loosestrife.**Ludvigia alternifolia** L. (alternate-leaved).

Seedbox.

Occasional or frequent. Moist places and about swamps.

June — Aug.

Ludvigia sphaerocarpa Ell. (globular-fruited).

Rare. Guilford, shallow water of ponds (W. H. Dudley, G. H. Bartlett). Aug. ; fruit Sept.— Oct.

Ludvigia polycarpa Short & Peter (many-fruited).

Local. Hartford, plentiful about shallow ponds in meadows along the Connecticut River (C. Wright, H. S. Clark & Bissell). July — Aug.

Ludvigia palustris (L.) Ell. (of marshes).*Isnardia palustris* L.

Marsh or Water Purslane.

Frequent or common. In streams, on muddy shores or in shallow water. June — Sept.

EPILOBIUM L. Willow-herb.**Epilobium angustifolium** L. (narrow-leaved).*Chamaenerion angustifolium* Scop.

Great Willow-herb. Fireweed.

Occasional or frequent. Woodlands and pastures, more often in newly cleared land. July — Sept.

The leaves and roots are used medicinally.

Epilobium molle Torr. (soft).*Epilobium strictum* Muhl. (?).

Open bogs and swamps. Rare or local in the northwestern part of the state, extending eastward to East Hartford (Weatherby) and southward to Fairfield (Eames). Aug.— Sept.

Epilobium densum Raf. (close together).*Epilobium lineare* Muhl. (?).

Occasional to frequent. Swamps and wet places. July — Sept.

Epilobium palustre L. (of marshes).

Rare. Litchfield, only one plant in a shaded sphagnum bog (Bissell). Aug.—Sept.

Epilobium palustre L., var. **monticola** Haussk. (living in mountains).

Rare. Sphagnum bogs: Wolcott (Bissell), Monroe (Harger), New Fairfield (Eames). Aug.—Sept.

The leaves and root are medicinal, as are those of the species.

Epilobium coloratum Muhl. (colored).

Moist or wet shaded places. Rare in the southeastern part of the state: Lyme (Graves). Frequent or common elsewhere. July — Aug.

Epilobium adenocaulon Haussk. (having glandular stems).

Damp woods and moist open ground. Rare in most districts: Salisbury (Mrs. C. S. Phelps), Norfolk and Middletown (Bissell), Watertown (Harger), Stratford (Eames), New Britain (Bissell). Frequent in New London County (Graves). July — Sept.

OENOTHERA L. Evening Primrose.**Oenothera cruciata** Nutt. (cross-shaped).

Oenothera biennis L., var. *cruciata* Torr. & Gray.

Onagra cruciata Small.

Rare or local. Waste ground: Hartford (H. S. Clark), Salisbury (Mrs. C. S. Phelps). July — Aug.

Oenothera Oakesiana Robbins.

Oenothera biennis L., var. *Oakesiana* Gray.

Onagra Oakesiana Britton in part.

Frequent along the coast on sea beaches, sand dunes and railway embankments (Graves, Eames). July — Oct.

Oenothera biennis L. (of two years).

Onagra biennis Scop.

Common Evening Primrose.

Common. Dry fields, pastures and roadsides. June — Oct.

All parts of the plant are used medicinally.

Oenothera grandiflora Ait. (large-flowered).

Oenothera biennis L., var. *grandiflora* Lindl.

Onagra biennis Scop., var. *grandiflora* Lindl.

Rare. Open ground: Franklin and Griswold (Graves), Southington (Andrews), Bridgeport (Eames), Norfolk (J. H. Barbour), Litchfield (Miss E. H. Thompson). Aug.—Oct. Adventive or fugitive from the South.

Oenothera laciniata Hill (slashed).

Oenothera sinuata L.

Rare. Waste ground: Norwich (Mrs. E. E. Rogers), East Lyme (Miss A. M. Ryon), East Hartford (J. F. Smith), Derby (Harger), Bridgeport (Eames). May—June. Fugitive from the southern United States.

Oenothera pumila L. (dwarf).

Kneiffia pumila Spach.

Frequent or common. Moist or dry open fields and roadsides. June—Aug.

Oenothera fruticosa L. (shrubby).

Sundrops.

Kneiffia fruticosa Raimann.

Rare. Borders of marshes: East Haven (G. Thurber), Fairfield (Eames). June—July.

The var. *HIRSUTA* Nutt. (rough-hairy), *Kneiffia fruticosa* Raimann, var. *pilosella* Britton, has been found in a field at Southington (H. M. Whitney), but afterward disappeared.

Oenothera linearis Michx. (very narrow).

Oenothera fruticosa L., var. *linearis* Wats.

Kneiffia linearis Spach.

Wet meadows and about marshes. Frequent or local along the coast from New Haven (H. S. Clark) westward; extending inland to Oxford and Southbury (Harger) and Woodbury (H. S. Clark). June—Aug.

Kneiffia Alleni Small or *Oenothera fruticosa* L. var. *humifusa* Allen is a sprawling or decumbent form of this, growing in barren sand; it occurs at Stratford (Eames).

The var. *EAMESII* Robinson is rare: Stratford, sandy shore of a salt pond (Eames).

Oenothera longipedicellata (Small) Robinson (having long flower-stalks).

Kneiffia longipedicellata Small.

Low meadows and borders of marshes. Occasional on the coast from Milford (Eames) westward; and inland at Southbury (A. E. Blewitt) and Woodbury (H. S. Clark & Bissell). June — July.

Oenothera pratensis (Small) Robinson (of meadows).

Kneiffia pratensis Small.

Rare. Border of salt marsh: Bridgeport (I. F. Moore). June.

GAURA L.

Gaura biennis L. (of two years).

Rare or local. Dry open ground: Southington (Bissell), New Haven (H. S. Clark, Harger), Oxford and Seymour (Harger). Aug.—Sept. In part adventive from the West.

CIRCAEA L. Enchanter's Nightshade.

Circaea lutetiana L.

Occasional or frequent. Moist woods. July — Aug.

Circaea alpina L. (alpine).

Rocky woods in moist humus. Rare in southern districts: North Stonington (Graves), Guilford (G. H. Bartlett), Orange and Huntington (Eames). Becoming occasional northward. June—July.

HALORAGIDACEAE.

WATER MILFOIL FAMILY.

MYRIOPHYLLUM L. Water Milfoil.

Myriophyllum spicatum L. (spiked).

Rare. Litchfield, in Bantam Lake (T. F. Allen), Kent, in Spectacle Ponds (Eames). July — Aug.

Myriophyllum verticillatum L. (whorled), var. **pectinatum** Wallr. (comb-like).

Myriophyllum verticillatum Gray's Manual ed. 6 in part.

Rare. In ponds and rivers: Lyme (Graves), Guilford

(G. H. Bartlett), Southington (Bissell, Andrews), Plainville (J. N. Bishop), Litchfield (Miss E. H. Thompson), New Milford and Kent (Eames). June — Aug.

Myriophyllum scabratum Michx. (roughened).

Myriophyllum pinnatum BSP., at least in part, possibly *Potamogeton pinnatum* Walt.

Water Milfoil.

Rare. Muddy shores of ponds: Groton and East Lyme (Graves). July — Sept.

Myriophyllum humile (Raf.) Morong (lowly).

Myriophyllum ambiguum Nutt., var. *limosum* Nutt.

Water Milfoil.

Rare to frequent. Borders of ponds and on muddy shores. July — Sept.

The forma *NATANS* (DC.) Fernald (floating), *Myriophyllum ambiguum* Nutt., and the forma *CAPILLACEUM* (Torr.) Fernald (hair-like), *Myriophyllum ambiguum* Nutt., var. *capillaceum* Torr., both occur in shallow or deep water of ponds, the latter even in rapid water.

Myriophyllum tenellum Bigel. (delicate).

Rare. Muddy shores and in shallow water: New London County (Graves), Litchfield (T. F. Allen), Kent (E. H. Austin & Eames). July — Aug.

PROSERPINACA L. Mermaid-weed.

Proserpinaca palustris L. (of marshes).

Mermaid-weed.

Frequent. Borders of ponds and in swamps. July — Aug.

ARALIACEAE. GINSENG FAMILY.

ACANTHOPANAX Dcne. & Planch.

Acanthopanax pentaphyllum (Thunb.) Marchal (five-leaved).

Acanthopanax.

Rare. Hartford, escaped from cultivation to roadside (H. S. Clark & Bissell). July. Adventive from Japan.

ARALIA L.***Aralia spinosa* L. (spiny).**

Angelica Tree. Hercules' Club. Devil's Walking-stick.

Rare. Escaped from cultivation to a roadside in Bridgeport (Eames). July—Aug. Adventive from the South.

***Aralia racemosa* L. (racemose).**

Spikenard. American Spikenard. Spignet. Hungry-root.

Occasional. Rich woods and thickets. July—Aug.

The root is medicinal and is much used both in professional and domestic practice.

***Aralia hispida* Vent. (rough-haired).**

Bristly Sarsaparilla. Wild Elder.

Occasional or local. Dry rocky woods or in sandy ground.

June—Aug.

The root is of medicinal value.

***Aralia nudicaulis* L. (naked-stemmed).**

Wild, False or American Sarsaparilla.

Frequent or common. Dry or moist woodlands. May—June.

The aromatic root is used medicinally.

PANAX L. Ginseng.***Panax quinquefolium* L. (five-leaved).**

Aralia quinquefolia Dcne. & Planch.

Ginseng.

Rare. Rich woods or rocky hillsides: Lyme and East Haddam (Graves), Guilford (G. H. Bartlett), Middletown (Harger), Southington (Andrews & Bissell), West Hartford (Miss A. Lorenz), Farmington (Bissell), Wolcott (Andrews), Woodbridge (P. P. Sperry), Colebrook (J. W. Robbins), Goshen (L. M. Underwood), Danbury (F. Mills), New Fairfield (Eames). June; fruit Aug.

The roots are much prized by the Chinese and are exported to China in large quantities, but they seem to be of no great medicinal value.

***Panax trifolium* L. (three-leaved).**

Aralia trifolia Dcne. & Planch.

Dwarf Ginseng. Groundnut.

Rich moist woods, often in sandy soil. Mid-April—June.

UMBELLIFERAE. PARSLEY FAMILY.

ERYNGIUM L. Eryngo.

Eryngium planum L. (flat).

Rare. Fairfield, in sandy waste ground (Eames). Aug.—Sept. Fugitive from Europe.

Eryngium yuccifolium Michx. (having leaves like Yucca, the Spanish Bayonet).

Eryngium aquaticum of Britton's Manual.

Rattlesnake Master. Button Snakeroot.

Rare. Bridgeport, in a sandy field (Eames). July. Introduced from the South, or possibly native.

The rootstock is medicinal.

SANICULA L. Sanicle. Black Snakeroot.

Sanicula marilandica L.

Frequent. Rich woods and more open places in either moist or dry ground. June—July.

The roots of this and the other species of the genus are used medicinally and their fibres in veterinary practice.

Sanicula gregaria Bicknell (herding together).

Rich moist or wet woods. Rare in most districts: New Britain (Bissell), Southington (Andrews, Bissell), Norfolk (J. H. Barbour), Seymour (Harger). Occasional in the southwestern part of the state (Eames). June—July.

Sanicula canadensis L.

Sanicula marilandica L., var. *canadensis* Torr.

Occasional or frequent. Dry rocky woods. June—July.

Sanicula trifoliata Bicknell (three-leaved).

Rare or local. Woods and fence-rows: New Britain and Plainville (Bissell), Southington (Andrews, Bissell), Oxford (Harger). June—July.

HYDROCOTYLE L. Water Pennywort.

Hydrocotyle umbellata L. (umbellate).

Rare or local. Muddy shores and in shallow water: Thompson (R. W. Woodward & Weatherby), Groton, East

Lyme and Old Lyme (Graves), Guilford (G. H. Bartlett), New Haven (C. Wright), Hamden and Litchfield (D. C. Eaton), Oxford (Harger), Ridgefield (Eames). June — Sept.

Hydrocotyle americana L.

Common. Moist woods and shaded places and in bogs. June — Sept.

OSMORHIZA Raf. Sweet Cicely.

Osmorhiza Claytoni (Michx.) Clarke.

Osmorhiza brevistylis DC.

Washingtonia Claytoni Britton.

Sweet Cicely.

Rocky woods. Rare in the eastern part of the state, becoming occasional or frequent westward. Late May — June.

The roots are less aromatic than those of *Osmorhiza longistylis*.

Osmorhiza longistylis (Torr.) DC. (long-styled).

Washingtonia longistylis Britton.

Sweet Cicely. Anise-root. Sweet Chervil.

Frequent. Rich woods, thickets and fence-rows. May — June.

An aromatic oil is obtained from the root.

CONIUM L. Poison Hemlock.

Conium maculatum L. (spotted).

Poison Hemlock. Spotted Parsley.

Rare. Roadsides and waste places: Groton and New London (Graves), Oxford and Woodbury (Harger), Bridgeport (Eames), Sharon (Bissell), Salisbury (Mrs. C. S. Phelps, Bissell). June — Aug. Naturalized from Europe.

An actively poisonous plant well known as the Hemlock of the ancients. The fruit and leaves are medicinal, the first named officinal. Cases of accidental poisoning to man have arisen from mistaking the seed for anise seed, the leaves for those of parsley, and the root for parsnips. The seed has been found to some extent as an adulterant of anise seed.

Blowing whistles made from the hollow stem has also been reported as a cause of poisoning.

PTILIMNIUM Raf. Mock Bishop's-weed.

Ptilimnium capillaceum (Michx.) Raf. (hair-like).

Discopleura capillacea DC.

Mock Bishop's-weed.

Occasional to frequent in salt, brackish and fresh marshes along the coast and within tidal influence a few miles inland; also extends up the Connecticut River as far as East Haddam (Dr. E. J. Thompson). Late July — Sept.

AEGOPODIUM L. Goutweed.

Aegopodium Podagraria L. (pertaining to gout).

Goutweed. Goutwort. Herb Gerard.

Rare. Yards, streets and waste places as an escape from cultivation: East Windsor (Bissell), Hartford (Mrs. W. Seliger), Norwalk (E. H. Baldwin). June. Adventive from Europe.

Occurs only in the variegated form.

CICUTA L. Water Hemlock.

Cicuta maculata L. (spotted).

Spotted Cowbane. Musquash Root. Beaver Poison. Water Hemlock.

Frequent. Swamps and borders of streams. July — Aug.

One of the most dangerously poisonous of native plants, and many cases of fatal poisoning to man have been reported. As a rule the root has been mistaken for some edible or innocent root like Horseradish, Sweet Cicely, etc. Cattle are poisoned by eating the rootstock or by drinking water containing juice from the bruised root. The leaves are used medicinally.

Cicuta bulbifera L. (bulb-bearing).

Water Hemlock.

Occasional or frequent. Banks of ponds and streams. July — Aug.

CARUM L. Caraway.

Carum Carvi L. (classical name for this species).

Caraway.

Occasional or local. Escaped from cultivation to fields and roadsides. June—July. Adventive from Europe.

The seeds are much used to flavor cakes and cookies and are eaten as a carminative.

PETROSELINUM Hoffm. Parsley.

Petroselinum hortense Hoffm. (of gardens).

Petroselinum Petroselinum Karst.

Carum Petroselinum Benth. & Hook.

Apium Petroselinum L.

Common or Garden Parsley.

Rare. Escaped from cultivation to waste ground in Bridgeport and Stratford (Eames). July—Aug. Adventive from Europe.

SIUM L. Water Parsnip.

Sium cicutaefolium Schrank (hemlock-leaved).

Sium lineare Michx.

Sium Carsonii Durand.

Occasional. Swamps and along streams in wet places. June—Sept.

CRYPTOTAENIA DC. Honewort.

Cryptotaenia canadensis (L.) DC.

Deringa canadensis Kuntze.

Honewort.

Frequent. Moist shady places. June—July.

ZIZIA Koch.

Zizia aurea (L.) Koch (golden).

Golden Alexanders. Golden Meadow Parsnip.

Common. Low fields and wet meadows. May—June.

The var. *OBTUSIFOLIA* Bissell (blunt-leaved), occurs at South Windsor and Canaan (A. W. Driggs), and Salisbury (Bissell).

Zizia cordata (Walt.) DC. (heart-shaped).

Dry or wet copses. Rare in most districts: Groton (Graves), Branford (Andrews), Farmington (D. C. Eaton). Occasional in Fairfield County (Eames). June — Oct.

FOENICULUM Hill. Fennel.**Foeniculum vulgare** Hill (common).

Foeniculum officinale All.

Foeniculum Foeniculum Karst.

Common or Garden Fennel.

Rare or local. Escaped from cultivation to roadsides and ballast grounds: Southington (Andrews), New Milford (E. H. Austin & Eames), Bridgeport (Eames). July — Sept. Adventive from Europe.

The seeds are aromatic, well known for their medicinal properties, and are officinal.

TAENIDIA Drude.**Taenidia integerrima** (L.) Drude (quite entire).

Pimpinella integerrima Gray.

Yellow Pimpernel.

Rare. New Haven (A. B. Eaton, 1859), Stratford and Milford, dry, lightly wooded banks along the Housatonic River (Eames), also at Wilton (Miss A. E. Carpenter). May — June.

LILAEOPSIS Greene.**Lilaeopsis lineata** (Michx.) Greene (marked with lines).

Crantzia lineata Nutt.

Muddy tidal shores: Norwich (W. A. Setchell), Montville, East Lyme and Old Lyme (Graves). Local or occasional along the coast westward. June — Aug.

LIGUSTICUM L. Lovage.**Ligusticum scoticum** L.

Sea Parsley. Scotch Lovage.

Rocky shores of the Sound. Occasional from East Lyme (Graves) eastward. July — Aug.

CORIANDRUM L. Coriander.**Coriandrum sativum L.** (sown).

Coriander.

Rare. Escaped from cultivation or spontaneous in waste places in Bridgeport (Eames). June—July. Fugitive from Europe.

The seeds are commonly used as flavoring in confections, pastries, liquors, etc.

AETHUSA L. Fool's Parsley.**Aethusa Cynapium L.** (dog-parsley).

Fool's Parsley.

Rare. Waste ground: Norwalk (E. H. Baldwin, Eames). June—Sept. Adventive from Europe.

The plant is poisonous.

PASTINACA L. Parsnip.**Pastinaca sativa L.** (sown).

Wild or Poison Parsnip.

Common. Roadsides and waste places. June—Sept. Naturalized from Europe.

Well known in cultivation, from which the wild plant is an escape. The plant is poisonous to some persons.

LEVISTICUM Hill. Lovage.**Levisticum officinale (L.) Koch** (of the shops).

Ligusticum Levisticum L.

Levisticum Levisticum Karst.

Lovage.

Rare. Roadsides and waste ground: Oxford (Harger), Salisbury (Mrs. C. S. Phelps). July—Aug. Adventive from Europe.

Commonly cultivated in old gardens for its carminative seeds, which are believed to possess several medicinal properties.

ANETHUM L. Dill.**Anethum graveolens L.** (strong-smelling).

Dill.

Rare. Escaped from cultivation or spontaneous in waste

places: Stratford and Bridgeport (Eames). July — Aug.
Fugitive or adventive from Europe.

The seeds are commonly used as flavoring in confections, pastries, liquors, etc.

HERACLEUM L. Cow Parsnip.

***Heracleum lanatum* Michx.** (woolly).

Cow Parsnip. Masterwort.

Occasional or frequent. Roadsides and waste ground in moist soils. June — July.

The root, leaves and seeds are medicinal.

CONIOSELINUM Fisch. Hemlock Parsley.

***Conioselinum chinense* (L.) BSP.**

Conioselinum canadense Torr. & Gray.

Hemlock Parsley.

Rare. Wet, cold woods and banks: Kent (E. H. Austin & Eames), Cornwall (E. E. Brewster), Canaan (C. K. Averill), Salisbury (Bissell). Aug. — Sept.

ANGELICA L. Angelica.

***Angelica villosa* (Walt.) BSP.** (hairy).

Angelica hirsuta Muhl.

Moist or dry fields and woods. New Haven (D. C. Eaton), Southington (Andrews & Bissell), and occasional westward, becoming frequent near the coast. July — Aug.

***Angelica atropurpurea* L.** (dark purple).

Masterwort. Purple or High Angelica.

Rare to occasional. Wet ground along streams. June — July.

The root and seeds are used medicinally. The fresh root is poisonous.

DAUCUS L. Carrot.

***Daucus Carota* L.** (classical name for the Carrot).

Wild Carrot.

Common. Fields, roadsides and waste places. June — Sept. Naturalized from Europe.

One of our most persistent, troublesome and wide-spread

weeds. A statute of Connecticut enacted in 1881, provides that "Every owner or possessor of lands shall cut down all wild carrots and Canada thistles growing thereon, or in the highway adjoining, so often as to prevent going to seed; and upon failure so to do, any person aggrieved, or any citizen of the town wherein the lands are situated, may complain to any grand juror of said town, who shall thereupon forthwith notify such owner or possessor of such complaint. If said owner or possessor shall still neglect to comply with the provisions of this section, he shall be fined not more than five dollars for each and every day of such neglect after such notice." Revised Statutes, Sec. 1374.

All parts of the plant have medicinal properties.

CORNACEAE. DOGWOOD FAMILY.

CORNUS L. Cornel. Dogwood.

Cornus canadensis L.

Dwarf or Low Cornel. Bunchberry.

Low or rocky woods and in swamps. Rare over most of the state, becoming frequent in Litchfield County. May—June.

Cornus florida L. (flowering).

Flowering Dogwood. Boxwood.

Occasional, local or frequent, mostly in rocky woods. May.

One of the most beautiful of our flowering trees and worthy of much more extensive cultivation. The bark, especially of the root, is used medicinally, and the powdered bark makes a good tooth-powder. The bark also yields a scarlet dye, and mixed with sulphate of iron makes a good black ink. The wood is heavy and close-grained and is used to make tool-handles and other small articles of turnery.

Cornus circinata L'Hér. (rounded).

Round-leaved Cornel or Dogwood.

Usually in rocky woods or on ledges. Rare in New London County (Graves); local or occasional elsewhere. May—June.

The bark is used medicinally.

Cornus Amomum Mill. (classical name for some shrub).

Cornus sericea L.

Cornus Purpusi Koehne.

Silky Cornel. Kinnikinnik. Swamp Dogwood.

Frequent. Low thickets and along streams. June—July.

The bark is used medicinally.

Cornus stolonifera Michx. (shoot-bearing).

Red-osier Cornel or Dogwood.

Wet places. Common in northwestern Connecticut, extending eastward to East Granby (I. Holcomb) and southward to New Milford (C. K. Averill); occurs also at East Hartford on a river bank (A. W. Driggs). May—June.

A good shrub for planting in moist soils.

Cornus paniculata L'Hér. (panicled).

Cornus candidissima Marsh. (?), not Mill.

Panicled Cornel.

Occasional or frequent. Roadsides, thickets and borders of woods in either dry or moist ground. July.

A handsome shrub both in flower and fruit, and well worthy of cultivation.

Cornus alternifolia L. f. (alternate-leaved).

Dogberry.

Frequent. Fence-rows, copses and open woods. May—June.

NYSSA L. Tupelo. Pepperidge. Sour Gum.

Nyssa sylvatica Marsh. (of woods).

Black or Sour Gum. Pepperidge. Tupelo.

Frequent. Woods and fields, usually in moist or wet ground. June.

The wood is soft but very hard to split; it is used for beetle-heads, chopping-bowls, rollers, etc. A tree of interesting habit and, especially in autumn, very ornamental. Worthy of cultivation, but very difficult to transplant from the wild.

ERICACEAE. HEATH FAMILY.

CLETHRA L. White Alder.

Clethra alnifolia L. (alder-leaved).

Sweet Pepperbush.

Swamps and low thickets. Rare in Litchfield County: Kent (E. H. Austin), Litchfield (Miss E. H. Thompson). Frequent elsewhere. July — Aug.

Often cultivated for its very fragrant white flowers.

CHIMAPHILA Pursh. Pipsissewa.

Chimaphila umbellata (L.) Nutt. (umbellate).

Prince's Pine. Pipsissewa.

Occasional or frequent. Dry woods. June — July.

The leaves are medicinal and are official.

Chimaphila maculata (L.) Pursh (spotted).

Spotted Wintergreen.

Occasional or frequent. Dry woods. July — Aug.

Has medicinal properties similar to those of *Chimaphila umbellata*.

MONESES Salisb. One-flowered Pyrola.

Moneses uniflora (L.) Gray (one-flowered).

Moneses grandiflora S. F. Gray.

One-flowered Pyrola or Wintergreen.

Rare or local. Pine woods: Woodstock (Graves), Union (H. E. Back), Avon (H. S. Clark), East Granby (I. Holcomb), Norfolk (Miss M. C. Seymour), Newtown (I. P. Blackman), Canaan (W. H. Leggett), Salisbury (Mrs. C. S. Phelps). June — July.

PYROLA L. Wintergreen. Shin Leaf.

Pyrola secunda L. (one-sided).

Dry woods, often under pines and hemlocks. Rare near the coast: Ledyard (Graves), Hamden (Harger), Orange (Eames), Fairfield (L. N. Johnson). Occasional or local elsewhere. June — July.

Pyrola chlorantha Sw. (green-flowered).

Dry woods, usually under evergreens. Rare near the

coast: Ledyard (Graves), Guilford (W. R. Dudley). Becoming occasional northward. June.

Pyrola elliptica Nutt. (oval).

Shin Leaf.

Occasional to frequent. Dry woods, usually in rich soil. June—July.

Pyrola americana Sweet.

Pyrola rotundifolia Gray's Manual ed. 6, not L.

Round-leaved Shin Leaf.

Frequent or local. Dry woods. June—July.

This, like all other species of the genus, is sometimes used medicinally.

MONOTROPA L. Indian Pipe. Pinesap.

Monotropa uniflora L. (single-flowered).

Indian Pipe. Corpse Plant. Fit-root. Ghost-flower.

Frequent. Moist or dry woods in rich soil. July—Aug.

The root is sometimes employed medicinally and has been used as a substitute for opium.

Monotropa Hypopitys L. (under pine trees).

Hypopitys Hypopitys Small.

Hypopitys lanuginosa Nutt.

Hypopitys americana Small.

Pinesap. False Beech-drops.

Occasional. Rich woods. Aug.—Sept.

LEDUM L. Labrador Tea.

Ledum groenlandicum Oeder.

Ledum latifolium Ait.

Labrador Tea.

Rare or local. Bogs or sphagnum swamps: Willington (Graves), Norfolk (Miss M. C. Seymour). June.

The leaves are medicinal.

RHODODENDRON L.

Rhododendron viscosum (L.) Torr. (sticky).

Azalea viscosa L.

Clammy Azalea. White Swamp Honeysuckle.

Low thickets and swamps. Rare or occasional in northwestern Connecticut; frequent elsewhere. June—July.

The var. *GLAUCUM* (Michx.) Gray (glaucous) is occasional growing with the typical form. The var. *NITIDUM* (Pursh) Gray (shining) is rare: Groton and Waterford (Graves), Huntington (Eames), Oxford (Harger).

Rarely occurs with pink flowers.

Rhododendron nudiflorum (L.) Torr. (naked-flowered).

Azalea nudiflora L.

Purple, Pink or Wild Azalea. Pinxter Flower. May Apple. Wild Honeysuckle.

Frequent or common. Woods and thickets. May—June.

This and the following species are desirable shrubs for cultivation.

Rhododendron canescens (Michx.) G. Don (hoary).

Azalea canescens Michx.

Purple Azalea.

Rare. Woods and thickets: Colchester and Voluntown (Graves), Norfolk and Salisbury (Bissell). May—June.

Rhododendron canadense (L.) BSP.

Rhododendron Rhodora Don.

Rhodora canadensis L.

Rhodora.

Swamps and low woods and thickets. Rare in most districts: Voluntown (Graves), East Hartford (A. W. Driggs), Enfield (Mrs. G. S. Phelps), Burlington (J. N. Bishop), Southington (J. Shepard), North Haven (A. W. Evans), Middlebury (Harger). Occasional or local in northeastern Connecticut. May.

Noteworthy as the subject of one of Emerson's best known poems.

Rhododendron maximum L. (greatest).

Great Laurel. Rhododendron. Rose Bay.

Rare or local. Swampy woods or rarely on dry wooded hillsides: Litchfield, New London and Tolland Counties. July.

One of the most striking of the broad-leaved evergreens, and extensively planted for ornament. The leaves contain a poisonous principle and are sometimes used in medicine.

KALMIA L. American Laurel.***Kalmia latifolia* L.** (broad-leaved).

Mountain Laurel. Calico Bush. Spoon-wood.

Frequent, local or common. Woods and thickets. June.

Often planted for ornament. All parts of the plant are poisonous except the wood. Many instances of fatal poisoning of stock from eating this and allied plants have been reported. Sheep and young cattle are most susceptible, but horses and even goats have been known to die from the effects of it. Cases of human poisoning are quite rare. The leaves are employed medicinally.

The following act of the General Assembly was approved and became a law April 17, 1907:—"The Mountain Laurel, *Kalmia latifolia*, is hereby made, constituted, and declared to be the State Flower of the State of Connecticut."

***Kalmia angustifolia* L.** (narrow-leaved).

Sheep Laurel. Lambkill. Wicky.

Bogs, wet ground or open pastures. Local in Fairfield County; frequent or common elsewhere. June—July.

Its medicinal and poisonous properties are as in *Kalmia latifolia*.

***Kalmia polifolia* Wang.** (gray-leaved).

Kalmia glauca Ait.

Pale or Swamp Laurel.

Rare. Sphagnum bogs: Burlington (J. N. Bishop), Norfolk (J. H. Barbour), Litchfield (Bissell), Woodbury (Harger), Ridgefield (S. B. Mead), Kent (C. K. Averill), Salisbury (Mrs. C. S. Phelps). May—June.

LEUCOTHOE D. Don. Fetter Bush.***Leucothoe racemosa* (L.) Gray** (racemose).

Leucothoe.

Rare or local. Moist woods or in swamps: Groton, Waterford, Ledyard and East Haddam (Graves), Haddam and Durham (Dr. E. J. Thompson), Middlefield (C. S. Phelps), East Hartford (A. W. Driggs), Stratford (Eames), Huntington (Harger). May—June.

ANDROMEDA L.

Andromeda glaucophylla Link (glaucous-leaved).

Andromeda Polifolia mostly of American authors, not L.

Bog or Marsh Rosemary. Marsh Holy Rose.

Rare. Sphagnum bogs: East Granby (Bissell), Litchfield (J. P. Brace, Harger, Weatherby & Bissell), Norfolk (J. H. Barbour), Kent (Eames, C. K. Averill), Ridgefield (S. B. Mead), Danbury (Miss G. L. Northrop). May—June.

LYONIA Nutt.

Lyonia mariana (L.) D. Don.

Andromeda mariana L.

Pieris mariana Benth. & Hook.

Stagger-bush.

Rare. Stratford, shrubby bank near the coast (J. P. Coles). June.

In New Jersey and southward it is injurious to sheep when eaten by them, producing a disease called "Staggers," hence its common name. A valuable shrub in cultivation.

Lyonia ligustrina (L.) DC. (like Ligustrum, the Privet).

Andromeda ligustrina Muhl.

Xolisma ligustrina Britton.

Male Berry.

Frequent or common. Woods, thickets and pastures; sometimes in dry but usually in moist ground. June—July.

Like the preceding species, is poisonous to stock, especially to sheep.

Lyonia ligustrina (L.) DC., var. **foliosiflora** (Michx.) Fernald (having leaves intermixed with the flowers).

Xolisma foliosiflora Small.

Low thickets. Forms that apparently belong with this variety occur rarely near the coast. June—July.

CHAMAEDAPHNE Moench. Leather Leaf. Cassandra.

Chamaedaphne calyculata (L.) Moench (calyculate).

Cassandra calyculata D. Don.

Leather Leaf.

Occasional or frequent. Sphagnum swamps and wet places. April — May.

EPIGAEA L. Ground Laurel. Trailing Arbutus.

Epigaea repens L. (creeping).

Trailing Arbutus. Mayflower.

Occasional or local. Rocky or sandy woods, usually preferring granite regions. April — May.

The leaves are used medicinally. In the neighborhood of cities it has been nearly exterminated by careless flower-gatherers. A statute of Connecticut, enacted in 1899, provides that "Every person who shall wilfully destroy, pull up, tear up, or dig up, any trailing arbutus from the land of another, or who shall sell, expose for sale, or purchase or have in his possession, any trailing arbutus with the roots or under-ground stems attached, taken from land not owned or occupied by him, shall be fined not more than twenty dollars." Revised Statutes, sec. 1224.

GAULTHERIA L. Aromatic Wintergreen.

Gaultheria procumbens L. (trailing).

Wintergreen. Checkerberry. Boxberry. Teaberry. Ivory Plum.

Occasional or frequent. Dry woods or sometimes in moist open ground, growing in colonies. July — Aug.

The berries and the young leaves are often eaten. The leaves and the volatile oil distilled from them are officinal and widely used in medical practice. The oil is also largely used as a flavoring agent.

ARCTOSTAPHYLOS Adans. Bearberry.

Arctostaphylos Uva-ursi (L.) Spreng. (bear-grape).

Bearberry. Uva-ursi.

Dry sandy or rocky places: Voluntown and Griswold (Graves), Norwich (Mrs. E. E. Rogers), Somers and West Hartford (Miss A. Lorenz), Middletown (J. D. Cochrane), Southington (D. C. Eaton, Andrews). Occasional or local near the coast. May — June.

The leaves are officinal and much used in medicine.

CHIOGENES Salisb. Creeping Snowberry.

Chiogenes hispidula (L.) Torr. & Gray (having fine rough hairs).

Chiogenes serpyllifolia Salisb.

Creeping Snowberry. White Teaberry. Moxie Plum. Capillaire.

Rare. Sphagnum swamps, usually in shade: Preston (W. A. Setchell & Graves), Voluntown (Graves), Burlington (J. N. Bishop), Bethany and Middlebury (Harger), Litchfield (Miss E. H. Thompson), Kent (E. H. Austin), Salisbury (Mrs. C. S. Phelps), Stafford (Weatherby). May—June.

This plant yields a volatile oil identical with that of *Gaultheria procumbens*.

GAYLUSSACIA HBK. Huckleberry.

Gaylussacia dumosa (Andr.) Torr. & Gray (bushy).

Dwarf Huckleberry.

Rare. Sphagnum bogs: Thompson (Harger), Southington (Andrews), Stratford and Huntington (Eames), Bethany and Middlebury (Harger), Litchfield (J. P. Brace, 1822; Weatherby & Bissell). June—July.

Gaylussacia frondosa (L.) Torr. & Gray (leafy).

Dangleberry. Blue Tangle.

Swamps or open sandy woods. Frequent in New London County (Graves), becoming rare northward and westward, reaching Putnam (Harger), Stafford and East Hartford (Weatherby), Manchester (A. W. Driggs), East Haven, Bethany and Oxford (Harger). June.

The berries are delicious.

Gaylussacia baccata (Wang.) K. Koch (berry-bearing).

Gaylussacia resinosa Torr. & Gray.

Common or Black Huckleberry.

Common. Moist or dry ground in various situations. May—June.

The forma *GLAUCOCARPA* (Robinson) Mackenzie (glaucous-fruited), Blue Huckleberry, is rare or occasional growing with the typical form.

The common Huckleberry, extensively gathered for market

and for home consumption. The fruit of the blue is often larger and better than that of the ordinary black form.

VACCINIUM L. Blueberry. Cranberry.

Vaccinium stamineum L. (having prominent stamens).

Polycodium stamineum Greene.

Buckberry. Deerberry. Squaw Huckleberry.

Dry woods: Waterbury (J. M. Richardson), New Canaan (E. H. Baldwin), and occasional in western Litchfield County. Late May—June.

A desirable shrub for planting in shaded situations.

Vaccinium pennsylvanicum Lam.

Dwarf Blueberry. Low Sweet or Early Sweet Blueberry.

Common. Dry rocky or sandy woods. May; fruit late June—early July.

The var. *ANGUSTIFOLIUM* (Ait.) Gray (narrow-leaved) is rare: Voluntown (Graves).

The fruit is sweet and delicious but not usually plentiful.

Vaccinium pennsylvanicum Lam., var. nigrum Wood (black).

Vaccinium nigrum Britton.

Low Black Blueberry.

Rare. Rocky woods: Salisbury (Mrs. C. S. Phelps). May.

Vaccinium canadense Kalm.

Sour-top or Velvet-leaf Blueberry.

Rare. Cold moist woods at an altitude of 1900 ft., Salisbury (Weatherby). May; fruit Aug.

Vaccinium vacillans Kalm (swaying).

Late Low Blueberry.

Common. Dry or rocky places. May; fruit July.

Fruit inferior to that of the following species.

Vaccinium corymbosum L. (corymbose).

High-bush or Tall Blueberry. Common or Swamp Blueberry or Bilberry.

Common. Swamps, borders of ponds and drier places.

May—June; fruit late July—Aug.

Fruit much gathered for market and for domestic use.

Vaccinium corymbosum L., var. amoenum (Ait.) Gray (pleasant).

Swamps and wet places. Occasional in the vicinity of the coast. May — early June.

Vaccinium atrococcum (Gray) Heller (having black berries).

Vaccinium corymbosum L., var. *atrococcum* Gray.

Black High Blueberry.

Occasional. Swampy woods and wet thickets. May — June.

Vaccinium Oxycoccus L. (sour berry).

Oxycoccus Oxycoccus MacM.

Small Cranberry.

Sphagnum bogs: Willington (Graves), Bloomfield (Weatherby), Southington (Andrews), Bethany (Harger), Stratford (Eames). Becoming occasional in northwestern Connecticut. May — June; fruit Sept. and through the winter.

The var. *ovalifolium* Michx. (oval-leaved), var. *intermedium* Gray's Manual ed. 7, occurs at Willington, Norfolk and Salisbury (Bissell), Simsbury (A. W. Driggs), Cornwall (E. E. Brewster).

Vaccinium macrocarpon Ait. (large-fruited).

Oxycoccus macrocarpus Pursh.

Cranberry. Large or American Cranberry.

Occasional or frequent. Wet meadows, bogs and low pastures. June — Aug.; fruit Sept.

Extensively cultivated on Cape Cod, Massachusetts, and in some parts of New Jersey, for its fruit, which is of much value and is sold everywhere in the markets. "Turkey and Cranberry Sauce" is almost a national dish.

PLUMBAGINACEAE. LEADWORT FAMILY.

LIMONIUM Hill. Sea Lavender. Marsh Rosemary.

Limonium carolinianum (Walt.) Britton.

Statice Limonium L., var. *caroliniana* Gray.

Marsh Rosemary. Sea Lavender. Ink-root. Canker-root.

Common along the coast on salt marshes and meadows. July — Sept.

The root has long been used in medicine.

PRIMULACEAE. PRIMROSE FAMILY.

HOTTONIA L. Featherfoil. Water Violet.

Hottonia inflata Ell. (inflated).

Water Violet. American Featherfoil.

Ditches and shallow water. Rare or local near the coast;
not reported far inland. June.

SAMOLUS L. Water Pimpernel. Brook-weed.

Samolus floribundus HBK. (abounding in flowers).

Samolus Valerandi L., var. *americanus* Gray.

Water Pimpernel. Brook-weed.

Occasional in salt or brackish marshes along the coast,
and rare inland as at Ridgefield (Eames & C. C. Godfrey).
June — Oct.

LYSIMACHIA L. Loosestrife.

Lysimachia vulgaris L. (common).

Golden Loosestrife.

Rare. Wilton, along roadside (Miss A. E. Carpenter).
July. Fugitive from Europe.

Lysimachia punctata L. (dotted).

Spotted Loosestrife.

Rare. Escaped from gardens to roadsides and waste
places: Norwich (W. A. Setchell, Mrs. E. E. Rogers &
Graves), Preston (Graves), Guilford (G. H. Bartlett), West-
port (Eames), Wilton (Miss A. E. Carpenter). June — July.
Naturalized from Europe.

Lysimachia quadrifolia L. (four-leaved).

Cross-wort.

Common. Woods and thickets. June — July.

The root is medicinal.

× **Lysimachia producta** (Gray) Fernald (lengthened).

Lysimachia foliosa Small.

Rare. Fields and thickets, mostly near the coast: Ledyard
(Graves), Groton and Putnam (Harger), Stratford and Fair-
field (Eames), Norwalk (Bissell), Stamford (W. H. Hoyt).
June — July.

This is regarded as a hybrid between *Lysimachia quadri-
folia* and *Lysimachia terrestris*.

***Lysimachia terrestris* (L.) BSP. (terrestrial).**

Lysimachia stricta Ait.

Frequent. Low grounds and open swamps. Late June —
Aug.

***Lysimachia Nummularia* L. (coin-like, referring to the shape
of the leaves).**

Moneywort. Yellow Myrtle.

Frequent. Lawns, roadsides and waste places, usually in
moist soil. June — July. Naturalized from Europe.

An escape from gardens and often a pest in lawns.

The plant is medicinal, in domestic practice applied to
sores and wounds.

***Lysimachia thyrsiflora* L. (having its flowers in a thyrse).**

Naumburgia thyrsiflora Duby.

Tufted Loosestrife.

Rare or local. Wet places about ponds: North Branford
(G. H. Bartlett), Bloomfield and East Granby (Weatherby),
Plainville (J. N. Bishop), Southington (Andrews), Hamden
and Litchfield (Harger), Norfolk (J. H. Barbour), Kent (C.
K. Averill), Salisbury (Mrs. C. S. Phelps, Bissell). June —
early July.

STEIRONEMA Raf.

***Steironema ciliatum* (L.) Raf. (fringed).**

Fringed Loosestrife.

Frequent. Thickets and low grounds. July — Aug.

***Steironema lanceolatum* (Walt.) Gray (lance-shaped).**

Swamps and borders of ponds and streams. Rare inland:
Ledyard and North Stonington (Graves), New Milford (I.
Holden & Baker). Occasional near the coast. July — Aug.

TRIENTALIS L. Chickweed Wintergreen.

***Trientalis americana* (Pers.) Pursh.**

Star Flower.

Occasional to frequent. Rich, usually moist woods.
May — June.

ANAGALLIS L. Pimpernel.**Anagallis arvensis L. (of cultivated ground).**

Common Pimpernel. Poor Man's Weather-glass.

Sandy or rocky ground and waste places. Rare inland: Southington (Andrews), Oxford (Harger). Frequent on or near the coast. June — Sept. Naturalized from Europe.

The var. *CAERULEA* (Schreb.) Ledeb. (sky-blue) is rare in lawns or waste ground: Granby (I. Holcomb), Norwalk (Miss A. E. Carpenter).

EBENACEAE. EBONY FAMILY.**DIOSPYROS L. Persimmon.****Diospyros virginiana L.**

Common Persimmon.

Rare. In New Haven, at Lighthouse Point, there is a grove of about one hundred and twenty-five small trees on the beach not far from the water's edge. Here they are exposed to fierce winds and winter storms which drive the salt water up around them, consequently they are not in a flourishing condition. This station is said to have been known as early as 1846, when the ground where they now stand was grassy and fertile. This is the only known station for this species in New England, and it is possible that it may not be native here but introduced from some more southern locality. July; fruit Oct.

OLEACEAE. OLIVE FAMILY.**FRAXINUS L. Ash.****Fraxinus americana L.**

White Ash.

Frequent. Woods and fields. May.

The wood is hard, white and tough; valued for interior finish, furniture, carriage-building, ladders, oars, tool-handles and agricultural implements. The bark is medicinal.

Fraxinus pennsylvanica Marsh.

Fraxinus pubescens Lam.

Fraxinus Darlingtonii Britton.

Red, Brown or River Ash.

Frequent. Along streams and in swamps, sometimes in drier places. May.

The timber is of less value than that of the White Ash, though used for furniture and the interior finish of buildings. Its medicinal properties are the same as those of *Fraxinus americana*.

Fraxinus pennsylvanica Marsh., var. *lanceolata* (Borkh.) Sarg.
(lance-shaped).

Fraxinus viridis Michx.

Fraxinus lanceolata Borkh.

Green Ash.

Rare. Low grounds: Norwich, Bozrah and Stonington (Graves), Rocky Hill (Andrews), New Haven (D. C. Eaton). May.

Fraxinus nigra Marsh. (black).

Fraxinus sambucifolia Lam.

Black, Swamp, Basket or Hoop Ash.

Occasional. Swamps and along streams. May.

The wood is much used for interior finish, cabinet work, barrel hoops and basket making. Medicinal properties the same as those of *Fraxinus americana*.

Fraxinus excelsior L. (taller).

Rare. Fairfield, roadside distant from any known source of origin (Eames). May. Native of the Old World.

FORSYTHIA Vahl.

Forsythia viridissima Lindl. (very green).

Golden Bell.

Rare. Wethersfield, escaped from cultivation to a pasture (H. S. Clark & Bissell). May. Fugitive from Asia.

SYRINGA L. Lilac.

Syringa vulgaris L. (common).

Common Lilac.

Occasional. Escaped from cultivation to roadsides and about abandoned house-sites. May. Naturalized from Europe.

LIGUSTRUM L. Privet.**Ligustrum vulgare L.** (common).

Privet. Prim.

Roadsides and thickets as an escape from cultivation.
Rare inland: Thompson and Wethersfield (Bissell), Woodbury and Oxford (Harger). Occasional or frequent near the coast. June—July. Naturalized from Europe.

GENTIANACEAE. GENTIAN FAMILY.**SABATIA Adans.****Sabatia campestris** Nutt. (growing in fields).

Rare. Bridgeport, in waste ground (Eames). Aug.—
Sept. Fugitive from the Southwest.

Sabatia stellaris Pursh (star-shaped).Sea or Marsh Pink. *Sabatia*.

Occasional or local on borders of salt marshes along the
coast. July—Sept.

Rarely occurs with white flowers.

Sabatia dodecandra (L.) BSP. (having twelve stamens).*Sabatia chloroides* Pursh.

Large Marsh Pink.

Rare. Marshes near the coast: Old Lyme (F. H. Dart),
Saybrook (Berzelius Catalogue), Guilford (Miss K. Dudley).
July—Sept.

GENTIANA L. Gentian.**Gentiana crinita** Froel. (having long hairs; referring to the fringed corolla).

Fringed Gentian.

Occasional or local. Moist meadows and pastures. Sept.—
Oct.

The gentian root of medicine, much used as a bitter tonic,
comes from *Gentiana lutea* of Europe, but our American
species have similar properties and are also used somewhat
in the same way.

Gentiana quinquefolia L. (five-leaved).*Gentiana quinqueflora* Hill.

Moist fields, roadsides and thickets. New Milford (C. D. Bishop, C. K. Averill), Litchfield (Miss E. H. Thompson), Norfolk (Miss M. C. Seymour), and occasional or frequent in northwestern Connecticut. Sept.—Oct.

Gentiana Andrewsii Griseb.

Closed Gentian. Bottle Gentian.

Occasional or frequent. Moist places and along streams. Sept.—Oct.

Sometimes occurs with white flowers.

BARTONIA Muhl.

Bartonia virginica (L.) BSP.

Bartonia tenella Muhl.

Occasional or frequent. Moist meadows and woods. July — Sept.

Bartonia paniculata (Michx.) Robinson (panicled).

Bartonia lanceolata Small.

Rare or local. Wet woods and meadows: Griswold (Harger), Hartford (H. S. Clark), Plymouth (Bissell), Stratford (Eames), New Milford (C. K. Averill). Aug.—Sept.

MENYANTHES L. Buckbean.

Menyanthes trifoliata L. (three-leaved).

Bog Bean. Marsh Trefoil. Water Shamrock.

Bogs, borders of ponds and in wet meadows. Occasional or local in most parts of the state; frequent in Litchfield County. May—June.

The leaves and rootstock are used medicinally. In parts of northern Europe it is used as a substitute for hops.

NYMPHOIDES Hill. Floating Heart.

Nymphoides lacunosum (Vent.) Fernald (of ponds).

Limnanthemum lacunosum Griseb.

Floating Heart.

Rare or local. In ponds and rivers: Groton and Lyme (Graves), Ledyard (W. A. Setchell), Branford (W. A. Setchell & Harger), Woodstock, Mansfield and Glastonbury

(Weatherby), Windsor (H. S. Clark, Weatherby & Bissell), Southington (Andrews), Litchfield (C. K. Averill), Danbury (F. Mills), Salisbury (Mrs. C. S. Phelps). July — Aug.

APOCYNACEAE. DOGBANE FAMILY.

VINCA L. Periwinkle.

Vinca minor L. (smaller).

Common Periwinkle. Blue Myrtle.

Occasional. Roadsides near dwellings and about cemeteries, escaped from cultivation. April — May. Naturalized from Europe.

Rarely occurs with white or variegated flowers or leaves.

APOCYNUM L. Dogbane. Indian Hemp.

Apocynum androsaemifolium L. (having leaves like *Hypericum Androsaemum*, the Tutsan).

Spreading Dogbane. Honey-bloom.

Frequent. Fields and roadsides. June — Aug.

The plant is medicinal.

Apocynum medium Greene (intermediate).

Apocynum Milleri Britton.

Apocynum urceolifer G. S. Miller.

Occasional or frequent. Dry fields, roadsides and open woods. June — Aug.

Very variable and several forms have been described.

Apocynum cannabinum L. (hemp-like).

American, Canadian or Indian Hemp.

Frequent. Fields, thickets and roadsides, often in sterile soil. June — July. The so-called *Apocynum album* Greene is a dwarfed or prostrate form of this species growing on rocky or sandy banks of streams or ponds, and is occasional.

The fibre has been used as hemp. The rootstock of this and closely allied species has active medicinal properties and is officinal.

Apocynum cannabinum L., var. **pubescens** (R. Br.) DC. (downy).

Apocynum pubescens R.Br.

Rare. Dry open places: East Lyme (Graves), East Haven and Southington (Bissell), Huntington (Harger), Bridgeport (Eames). July.

ASCLEPIADACEAE. MILKWEED FAMILY.

ASCLEPIAS L. Milkweed. Silkweed.

***Asclepias tuberosa* L. (tuberous).**

Asclepias tuberosa L., var. *decumbens* Pursh.

Asclepias decumbens L.

Butterfly-weed. Pleurisy-root.

Dry fields and roadsides. Rare in Litchfield County, occasional to frequent in other sections. July — Aug.

The root was formerly officinal and is used medicinally.

***Asclepias purpurascens* L. (purplish).**

Purple Milkweed.

Occasional or frequent. Moist fields and open pastures. June — July.

***Asclepias incarnata* L. (flesh-colored).**

Swamp Milkweed.

Borders of ponds and streams. Occasional along the Connecticut and Housatonic Rivers and in the northwestern part of the state; rare elsewhere. July — Aug.

***Asclepias incarnata* L., var. *pulchra* (Ehrh.) Pers. (beautiful).**

Asclepias pulchra Ehrh.

Swamp Milkweed.

Swamps and wet places. Frequent except in Litchfield County where it is occasional or rare. July — Aug.

The root is medicinal.

***Asclepias syriaca* L.**

Asclepias Cornuti Dcne.

Common Milkweed or Silkweed.

Common. Roadsides, pastures and waste places. July — Aug.

The root is medicinal. The young shoots are used as Asparagus. Sometimes troublesome as a weed.

Asclepias amplexicaulis Sm. (stem-clasping; referring to the leaves).

Asclepias obtusifolia Michx.

Open ground in sandy soil. Rare or local in southern Fairfield County, occasional or frequent elsewhere. June—July.

Asclepias phytolaccoides Pursh (like *Phytolacca*, the Poke-weed).

Asclepias exaltata Muhl. (?).

Poke Milkweed.

Occasional. Moist woods and thickets. Late June—July.

Asclepias variegata L. (of various colors).

Rare. Dry woods: Norwich (Miss Wohlfurth), East Lyme (Miss A. M. Ryon), Portland (Dr. E. J. Thompson). July.

Asclepias quadrifolia Jacq. (four-leaved).

Occasional. Dry woods. June—July.

Asclepias verticillata L. (whorled).

Whorled Milkweed.

Occasional or local. Sandy or sterile ground. July—Aug.

ACERATES Ell. Green Milkweed.

Acerates viridiflora Ell. (green-flowered).

Rare. Dry open ground: East Haven (O. Harger, H. S. Clark), Oxford (Harger), New Milford (Eames). July—Aug.

The var. **LANCEOLATA** (Ives) Gray (lance-shaped), var. *Ivesii* Britton, has been found at New Haven (E. Ives).

CYNANCHUM L.

Cynanchum nigrum (L.) Pers. (black).

Vincetoxicum nigrum Moench.

Black Swallow-wort.

Rare. Roadsides and fields as an escape from cultivation: Stonington (W. E. Britton), New London (Graves), New Haven (H. S. Clark, Harger), Oxford (Harger), Orange and Bridgeport (Eames), Stamford (W. H. Hoyt). June—July. Adventive from Europe.

CONVOLVULACEAE. CONVULVULUS FAMILY.

IPOMOEA L. Morning Glory.

Ipomoea coccinea* L. (red).Quamoclit coccinea* Moench.

Small Red Morning Glory.

Rare. Southington, in waste ground (Andrews), Orange (Harger). July — Sept. Fugitive from the Southwest or from tropical America.

***Ipomoea hederacea* Jacq. (like *Hedera*, the Ivy).**

Ivy-leaved Morning Glory.

Rare. Roadsides and waste ground as an escape from gardens: New London (Graves), Glastonbury (Bissell), Stratford (Eames), Oxford (Harger), Darien (Miss A. E. Carpenter). Aug. — Sept. Adventive from tropical America.

***Ipomoea purpurea* (L.) Roth (purple).**

Common Morning Glory.

Occasional. Waste places and about old gardens as an escape from cultivation. July — Sept. Adventive or fugitive from tropical America.

***Ipomoea pandurata* (L.) G. F. W. Mey. (fiddle-shaped).**

Wild Potato-vine. Man-of-the-Earth.

Rare. Dry soil of upland pastures: New Milford (J. W. Robbins), Kent (E. H. Austin). June — Aug.

The root is medicinal.

CONVOLVULUS L. Bindweed.

***Convolvulus spithameus* L. (a span long).**

Rare or local. Gravelly hillsides: Southington (Andrews), Oxford (Harger), Southbury (B. B. Bristol), New Milford (C. K. Averill & E. H. Austin), Salisbury (Mrs. C. S. Phelps). May — June.

***Convolvulus japonicus* Thunb.**

California Rose.

Rare. Sandy fields as an escape from cultivation, mostly in the double-flowered form: Plainville (Bissell), Southington (Andrews), Trumbull (Eames), Wilton (Miss A. E. Carpenter). July. Adventive from eastern Asia.

Convolvulus sepium L. (of hedges).

Convolvulus sepium L., var. *americanus* Sims.

Wild Morning Glory. Hedge Bindweed.

Frequent. Sandy fields, roadsides and waste places. June — Aug.

The root is medicinal.

Convolvulus sepium L., var. *pubescens* (Gray) Fernald (downy).

Convolvulus sepium L., var. *repens* Gray.

Convolvulus repens L.

Open fields or stony and gravelly places on and near the coast. Frequent eastward, becoming occasional westward. June — Aug.

The root is medicinal.

Convolvulus arvensis L. (of cultivated ground).

Field Bindweed.

Rare. Waste ground and roadsides: New London (Graves), Hartford (H. S. Clark, Bissell), New Haven (Miss A. E. Carpenter), Southington (Andrews), Ansonia (Harger), Orange and Bridgeport (Eames), Westport (Eames & C. C. Godfrey). July. Adventive from Europe.

CUSCUTA L. Dodder. Love Vine.**Cuscuta Epithymum** Murr. (upon thyme).

Clover Dodder.

Rare. Clover fields: Mansfield (Mrs. C. S. Phelps), East Windsor and Granby (Bissell), Southington (Andrews), Oxford (Harger), Litchfield (Miss E. H. Thompson), East Lyme (Miss A. M. Ryon), Fairfield (Eames). July — Sept. Adventive from Europe.

Cuscuta arvensis Beyrich (of cultivated ground).

Field Dodder.

Rare. In fields: Granby (Bissell), Oxford and Southbury (Harger). July — Sept.

Cuscuta Coryli Engelm. (of hazel).

Cuscuta inflexa Engelm.

Hazel Dodder.

Rare. On shrubs: Norwich (Mrs. E. E. Rogers). Aug.

Cuscuta Gronovii Willd.

Dodder. Love Vine.

Common. On herbs and low shrubs, often very plentiful in open swamps. July — Sept.

Cuscuta compacta Juss. (compact).

Rare or local. On shrubs: Groton (Graves), Franklin (R. W. Woodward), Milford, Stratford and Westport (Eames). Aug.— Sept.

POLEMONIACEAE. POLEMONIUM FAMILY.**PHLOX L.****Phlox paniculata** L. (panicled).

Phlox acuminata Pursh.

Phlox glandulosa Shuttlw.

Phlox amplifolia Britton.

Garden Phlox.

Occasional. Roadsides and about old gardens. Aug.— Sept. Adventive from the Southwest.

Phlox maculata L. (spotted).

Wild Sweet William.

Rare. Escaped from cultivation to roadsides and waste places: Waterford (Graves), Franklin (R. W. Woodward & Weatherby), Fairfield, well established at two localities (Eames). June — Aug. In Connecticut adventive from the South or West.

The var. *CANDIDA* Michx. (shining white) occurs at Fairfield (Eames).

Phlox pilosa L. (hairy).

Rare. Moist grassy bank, Southbury (Harger). May — June.

This is the only reported station for the species in New England.

Phlox subulata L. (awl-shaped).

Ground or Moss Pink.

Rare to occasional. Escaped from cultivation, often in and near old cemeteries. May. Adventive from the West.

It is seen rarely with white flowers.

POLEMONIUM L. Greek Valerian.**Polemonium Van-Bruntiae** Britton.

Polemonium coeruleum Gray's Manual ed. 6, not L.

Rare. In swamps: Salisbury (Mrs. C. S. Phelps).
June—July.

HYDROPHYLLACEAE. WATERLEAF FAMILY.**HYDROPHYLLUM L.** Waterleaf.**Hydrophyllum virginianum L.**

Waterleaf.

Rare or local. Moist or wet shady places: South Windsor (Weatherby), Waterbury (W. H. Paton), Wilton (Miss E. A. Carpenter, Eames), Norwalk (G. P. Ells), North Canaan (H. N. Adams, M. B. Tobey), Salisbury (Mrs. C. S. Phelps). June.

ELLISIA L.**Ellisia Nyctelea L.**

Macrocalyx Nyctelea Kuntze.

Rare. New London, in a pasture (Mrs. E. M. Tilton).
May—July. Fugitive from the South or West.

PHACELIA Juss.**Phacelia viscida** (Benth.) Torr. (sticky).

Rare. Meriden, escaped from cultivation and spontaneous in a spot on which muck had been deposited (Miss E. J. Leonard). June. Fugitive from California.

Phacelia Purshii Buckley.

Rare. Branford, waste ground at Short Beach (Miss E. J. Leonard). May—June. Fugitive from the Central States.

BORAGINACEAE. BORAGE FAMILY.**CYNOGLOSSUM L.** Hound's Tongue.**Cynoglossum officinale L.** (of the shops).

Common Hound's Tongue.

Rare. Roadsides and pastures: Ledyard (Graves), Meriden and New Haven (Harger), Bridgeport (C. K.

Averill), Salisbury (Mrs. C. S. Phelps). June — Aug. Adventive from Europe.

Cynoglossum boreale Fernald (northern).

Cynoglossum virginicum of Gray's Manual ed. 6 in part.

Wild Comfrey.

Rare. Rocky woods: East Haven (J. A. Allen), Meriden (Andrews), Norfolk (J. H. Barbour), Barkhamsted and Salisbury (Mrs. C. S. Phelps), Cornwall (E. E. Brewster). June — July.

LAPPULA Moench. Stickseed.

Lappula virginiana (L.) Greene.

Echinosperrum virginicum Lehm.

Stickseed. Beggar's Lice.

Frequent. Woods, hedge-rows and thickets in dry ground. July — Aug.

Lappula echinata Gilib. (prickly).

Echinosperrum Lappula Lehm.

Lappula Lappula Karst.

Rare. Waste places: New Haven (Merrill), Seymour (Harger), New Milford (Eames & E. H. Austin), Salisbury (Mrs. C. S. Phelps). July — Aug. Adventive from Europe.

AMSINCKIA Lehm.

Amsinckia lycopsoides Lehm. (like *Lycopsis*, the Bugloss).

Rare. Cultivated or waste ground: Hartford (Bissell), Southington (Andrews), Salisbury (Mrs. C. S. Phelps). May — July. Fugitive from the Pacific Coast.

SYMPHYTUM L. Comfrey.

Symphytum officinale L. (of the shops).

Common Comfrey.

Rare or local. Roadsides, waste places and along streams, usually in moist ground and as an escape from cultivation. June — Aug. Naturalized from Europe.

Formerly used medicinally.

Symphytum tuberosum L. (tuberous).

Rare. Ditches and wet places: Guilford (G. H. Bartlett), Southington (Andrews). May — June. Adventive from Europe.

Symphytum asperrimum Donn (very rough).

Rough Comfrey.

Rare. Moist roadsides: Oxford (Harger), Kent (Eames). June — Aug. Adventive from Europe.

BORAGO L. Borage.**Borago officinalis** L. (of the shops).

Borage.

Rare. Bridgeport, escaped from gardens (I. Holden & Baker). June — Sept. Fugitive from Europe.

Cultivated for ornament and for its supposed medicinal properties.

ANCHUSA L. Alkanet.**Anchusa officinalis** L. (of the shops).

Rare. Waste ground in Fairfield (Eames). June — Aug. Adventive from Europe.

MYOSOTIS L. Forget-me-not. Scorpion Grass.**Myosotis scorpioides** L. (scorpion-like).*Myosotis palustris* Hill.

True Forget-me-not.

Rare. Along streams as an escape from cultivation: North Branford and Oxford (Harger), Stratford (Eames), Southington (Andrews). May — June. Native of Europe.

Myosotis laxa Lehm. (loose).

Wild Forget-me-not.

Frequent. Along streams and in wet places. May — June.

Myosotis arvensis (L.) Hill (of cultivated ground).

Rare. In grassland: Norwich (Mrs. E. E. Rogers), Ledyard (Graves), Granby (I. Holcomb). May — June.

Myosotis virginica (L.) BSP.*Myosotis verna* Nutt.

Occasional or local. Dry, sterile and rocky places. May — June.

LITHOSPERMUM L. Gromwell. Puccoon.**Lithospermum arvense** L. (of cultivated ground).

Corn Gromwell. Stone-seed.

Occasional. Sandy or waste places. May—June. Naturalized from Europe.

Lithospermum officinale L. (of the shops).

Common Gromwell.

Rare or local. Dry fields and in rocky ground: New Britain (Bissell), Southington (Andrews), North Canaan (Weatherby), New Milford (A. E. Blewitt). June—Sept. Naturalized from Europe.

ONOSMODIUM Michx. False Gromwell.

Onosmodium virginianum (L.) A. DC.

Gravel-weed. Pearl-plant. Wild Job's Tears. False Gromwell.

Rare. Dry or sandy ground: Preston (Graves), East Haddam (Dr. E. J. Thompson), Hartford and Windsor (H. S. Clark), New Haven (D. C. Eaton), Fairfield (Eames), Ansonia and Southbury (Harger), Kent (E. H. Austin). June—July.

The root and seeds are medicinal.

ECHIUM L. Viper's Bugloss.

Echium vulgare L. (common).

Viper's Bugloss. Blue-weed. Blue Devil.

Open sandy or sterile places. Rare or local over most of the state: Montville (Graves), Windsor (H. S. Clark), Southington (Andrews), New Haven (Harger), New Hartford (Andrews & Bissell). Becoming occasional in western Connecticut. July—Aug. Naturalized from Europe.

Sometimes occurs with rose-colored flowers. A showy plant when in bloom, but a bad weed, difficult to eradicate.

VERBENACEAE. VERVAIN FAMILY.

VERBENA L. Vervain.

Verbena officinalis L. (of the shops).

European Vervain.

Rare. Waste ground: New Haven (J. S. Smith), Bridgeport (Eames). June—Sept. Fugitive from the Old World.

The herb was reputed to have many desirable properties and was highly esteemed in old times, but is rarely if ever used now.

***Verbena urticaefolia* L.** (having leaves like *Urtica*, the Nettle).

White Vervain.

Frequent. Fields, roadsides and waste ground. July — Aug.

***Verbena angustifolia* Michx.** (narrow-leaved).

Rare or local. Sandy fields: Waterford (Graves), New Haven (Harger), Orange (Eames, Andrews & Bissell), Stratford (I. Holden & Baker), Southington (Andrews & Bissell), Kent (E. H. Austin, Eames & C. C. Godfrey), Salisbury (Mrs. C. S. Phelps). June — July.

***Verbena hastata* L.** (spear-shaped).

Verbena hastata L., var. *pinnatifida* Britton.

Blue Vervain.

Frequent. Roadsides, fields and waste places. July — Aug. A hybrid of this with *Verbena urticaefolia* has been collected at Oxford (Harger).

Flowers sometimes rose color. The root and leaves are medicinal and are occasionally used in domestic practice.

***Verbena stricta* Vent.** (upright; straight).

Hoary Vervain.

Rare. Fields and waste places: Old Lyme (Graves), Naugatuck (Mrs. C. H. Lyman), Bridgeport (Eames). June — Aug. Adventive from the West.

***Verbena bracteosa* Michx.** (having bracts).

Rare or local. Waste ground: Hebron (Graves), Naugatuck (Mrs. C. H. Lyman), Bridgeport (Eames), Winchester (M. L. Fernald & Weatherby). June — Aug. Adventive from the West.

***Verbena canadensis* (L.) Britton.**

Verbena Aubletia Jacq.

Verbena Drummondii of authors.

Verbena.

Rare. Escaped from old gardens: Southington (Bis-

sell), Oxford (Harger). June—Sept. Fugitive from the Southwest.

Many of the cultivated forms of *Verbena* are derived from this species.

LABIATAE. MINT FAMILY.

AJUGA L. Bugle Weed.

***Ajuga genevensis* L.**

Erect Bugle.

Rare. Along roadsides and about dwellings as an escape from cultivation: Middletown (Miss Day), New Haven (D. C. Eaton), Southington (Andrews & Bissell), Plainville (J. N. Bishop), Bristol (W. A. Terry), Milford (Eames & C. C. Godfrey). May—June. Adventive from Europe.

Flowers sometimes rose-colored or white.

TEUCRIUM L. Germander.

***Teucrium canadense* L.**

American Germander. Wood Sage.

Rare or occasional. Fields, roadsides and in alluvial soil along streams. July—Aug.

***Teucrium canadense* L., var. *littorale* (Bicknell) Fernald (of the sea shore).**

Teucrium littorale Bicknell.

Coast Germander.

Frequent on beaches and about salt meadows along the coast. July—Aug.

TRICHOSTEMA L. Blue Curls.

***Trichostema dichotomum* L. (forked in pairs).**

Blue Curls. Bastard Pennyroyal.

Common. Dry sandy or sterile soil. July—Sept.

Sometimes occurs with pink flowers.

***Trichostema lineare* Walt. (very narrow).**

Rare. Milford, in sandy soil (J. W. Robbins, 1829). July—Aug.

SCUTELLARIA L. Skullcap.***Scutellaria lateriflora* L. (side-flowering).**

Mad-dog Skullcap.

Frequent. Wet places, usually in shade. July — Sept.

Sometimes occurs with white flowers. The plant was formerly used as a remedy for hydrophobia, whence its common name. It is officinal in medical practice.

***Scutellaria galericulata* L. (having a small helmet; referring to the calyx).**

Marsh Skullcap.

Occasional. Borders of ponds, wet places along streams, open swamps or sometimes also on dry banks or even in sand near the coast. June — Aug.

Sometimes occurs with pink flowers.

***Scutellaria integrifolia* L. (entire-leaved).**

Rare. Sandy fields and in woodland, either dry or moist: Union (G. Towne), Norwich (Mrs. E. E. Rogers), Lyme (Graves), East Haddam (W. E. Nichols), East Hartford (Weatherby), East Windsor and Rocky Hill (Bissell), Hartford (H. S. Clark), Windsor Locks (Miss A. E. Carpenter). July.

***Scutellaria parvula* Michx. (small), var. *ambigua* (Nutt.)**

Fernald (doubtful).

Scutellaria parvula Britton, not Michx.

Rare. Dry sandy or rocky ground: Guilford (G. W. Hawes), East Haven (H. C. Beardslee, Harger), Plainville (J. N. Bishop), Orange (A. H. Young), Salisbury (Mrs. C. S. Phelps). June — Aug.

MARRUBIUM L. Horehound.***Marrubium vulgare* L. (common).**

Common Horehound.

Rare or occasional. Roadsides and waste ground as an escape from cultivation. June — July. Naturalized from Europe.

Used as a cough medicine and in candy. An officinal medicine.

SIDERITIS L. Ironwort.

Sideritis montana L. (of mountains).

Rare. Naugatuck, one plant in waste ground (A. E. Blewitt). July. Fugitive from southeastern Europe.

AGASTACHE Clayt. Giant Hyssop.

Agastache nepetoides (L.) Kuntze (like Nepeta, the Catnip).

Lophanthus nepetoides Benth.

Rare or local. Rocky woods and thickets: Meriden (D. C. Eaton), Southington (Andrews), Derby (Harger), Norwalk (Bissell). Aug.—Sept.

Agastache scrophulariaefolia (Willd.) Kuntze (having leaves like Scrophularia, the Figwort).

Lophanthus scrophulariaefolius Benth.

Rare or occasional. Woods, thickets and waste ground, either moist or dry. July—Aug.

The var. **MOLLIS** (Fernald) Heller (soft) occurs at Fairfield (Eames).

Agastache Foeniculum (Pursh) Kuntze (like Foeniculum, the Fennel; referring to its odor).

Lophanthus anisatus Benth.

Agastache anethiodora Britton.

Rare. Waste ground: Portland (Mrs. F. W. Starmer). Aug. Fugitive from the West.

NEPETA L. Cat Mint.

Nepeta Cataria L. (of a cat).

Catnip.

Frequent. Fields and waste ground. July—Oct. Naturalized from Europe.

The herb is well known to have strong attraction for cats. Much used in domestic medical practice.

Nepeta hederacea (L.) Trevisan (like Hedera, the Ivy).

Nepeta Glechoma Benth.

Glechoma hederacea L.

Gill-over-the-Ground. Ground Ivy. Gill. Robin Runaway.

Frequent. Moist shaded places in fields, waste ground

and about old yards. April—June. Naturalized from Europe.

Sometimes a bad weed in lawns and gardens. Formerly used in domestic medical practice.

DRACOCEPHALUM L. Dragon Head.

Dracocephalum parviflorum Nutt. (small-flowered).

Dragon Head.

Rare. Southington, one plant as a fugitive in a garden (Andrews); also occurs at New Milford (Eames & E. H. Austin). June—July. Native from New York westward.

PRUNELLA L. Self-heal.

Prunella vulgaris L. (common).

Brunella vulgaris of Manuals.

Common Self-heal or Heal-all. Carpenter-weed.

Common. Fields, woods and waste ground, both dry and moist. June—Oct.

Often a troublesome weed in lawns and difficult to eradicate. Formerly used as a medicine. Sometimes occurs with white flowers.

PHYSOSTEGIA Benth. False Dragon Head.

Physostegia virginiana (L.) Benth.

Lion's Heart.

Roadsides and waste ground. Occasional in New London County, becoming rare or local northward and westward. Aug. Introduced from the West.

GALEOPSIS L. Hemp Nettle.

Galeopsis Tetrahit L.

Common Hemp Nettle.

Rare or occasional. Roadsides and waste grounds. July—Sept. Introduced from Europe.

A troublesome weed in some parts of northern New England.

Galeopsis Ladanum L.

Red Hemp Nettle.

Rare. Naugatuck, in waste ground (B. B. Bristol). June—July. Fugitive from Europe.

LAMIUM L. Dead Nettle.

Lamium amplexicaule L. (stem-embracing; referring to the leaves).

Henbit.

Waste or cultivated ground. Occasional in Fairfield County; rare or local elsewhere. May—Oct. Naturalized from Europe.

Lamium purpureum L. (purple).

Red Dead Nettle.

Rare. Waste ground: Fairfield (Eames). May—June. Adventive from Europe.

Lamium hybridum Vill. (mongrel).

Local. Waste or cultivated ground: Cornwall, becoming a weed (T. S. Gold). May—June. Adventive from Europe.

Lamium maculatum L. (spotted).

Spotted Dead Nettle.

Rare. Along roadsides and in yards as an escape from cultivation: Norwich (Mrs. E. E. Rogers), New Haven (D. C. Eaton), Southington (Andrews & Bissell), Woodbury (Harger). May—Oct. Introduced from Europe.

Sometimes occurs with white flowers.

LEONURUS L. Motherwort.

Leonurus Cardiaca L. (of the heart).

Common Motherwort. Lion's Tail. Throw-wort.

Frequent. Roadsides and waste places. June—July. Naturalized from Europe.

Formerly used in domestic medical practice, especially for diseases of women, whence the common name.

BALLOTA L. Fetid Horehound.

Ballota nigra L. (black).

Black Horehound.

Rare. An escape to roadsides: New Haven (D. C. Eaton), Milford (Eames). June—Aug. Native of Europe.

Formerly cultivated because of supposed medicinal qualities.

STACHYS L. Hedge Nettle.**Stachys hyssopifolia** Michx. (hyssop-leaved).

Rare. Killingly, sandy border of pond (Bissell), Wallingford (N. Coleman), West Hartford (H. S. Clark). July — Aug.

Stachys tenuifolia Willd. (thin-leaved), var. **aspera** (Michx.) Fernald (rough).**Stachys aspera** Michx.

Rare or local. Moist ground along streams or on roadsides: Lyme (Graves), Glastonbury (A. W. Driggs, Bissell), East Windsor (Bissell), Stratford (Eames). July — Aug.

Stachys palustris L. (growing in marshes).

Woundwort.

Rare. Roadsides, fields and wet meadows: Fairfield and Bridgeport (Eames), Salisbury (Mrs. C. S. Phelps), New Fairfield (Harger). July — Aug.

The var. *HOMOTRICHIA* Fernald (having the hairs alike) occurs at Oxford (Harger).

SALVIA L. Sage.**Salvia lyrata** L. (lyre-shaped).

Lyre-leaved Sage.

Local. About a fourth of an acre of grassy meadow is covered with this species in Woodbridge (Harger). May — June.

Salvia pratensis L. (belonging to a meadow).

Meadow Sage.

Rare. Fields and cultivated ground: Norwich (Mrs. E. Rogers), Southington (L. Fox). June. Fugitive from Europe.

Salvia officinalis L. (of the shops).

Garden Sage.

Rare. Roadsides and cultivated ground as an escape from cultivation: Southington (Andrews), Milford (Eames). June. Adventive from Europe.

The leaves are officinal in medical practice, also used for flavoring meats, cheese, etc.

Salvia splendens Ker (shining).

Scarlet Sage.

Rare. Escaped from cultivation to waste places: Westport (Eames). Sept.—Oct. Fugitive from Brazil.

MONARDA L. Horse Mint.**Monarda didyma** L. (twin).

Bee Balm. Oswego Tea. Fragrant Balm.

Rare or occasional. Roadsides, about old houses and borders of woods as an escape from cultivation. July — Aug. Naturalized from the West.

The herb finds some popular uses in medical practice, depending on its aromatic properties. All our species are similar in this respect and are one of the sources of thymol.

Monarda clinopodia L. (like *Clinopodium*, the Basil).

Basil Balm.

Rare. Waste ground and roadsides: Ledyard (Graves), Waterbury (A. E. Blewitt). July — Aug. Adventive from the West.

Monarda fistulosa L. (tubular).

Wild Bergamot.

Rare. Dry soil of shrubby and waste places: East Lyme (Miss A. M. Ryon), Bolton (Bissell), Manchester (H. S. Clark), West Hartford and Southbury (Harger), Stratford, Bridgeport, Fairfield and Norwalk (Eames). July — Aug.

The var. *RUBRA* Gray (red), *Monarda media* Willd., is rare as an escape from gardens: Groton (Graves), Andover (Mrs. C. S. Phelps & Weatherby), Somers and Southington (Bissell), Bridgeport (Eames). The variety is adventive from the West as is the species in part.

Monarda mollis L. (soft).*Monarda fistulosa* L., var. *mollis* Benth.

Downy Bergamot.

Occasional or frequent. Dry pastures, waste places and roadsides. July — Aug.

BLEPHILIA Raf.**Blephilia ciliata** (L.) Raf. (fringed).

Wood Mint.

Rare. Dry open ground: Plainville (Bissell), Orange (A. W. Evans), Beacon Falls (Harger), Salisbury (Mrs. C. S. Phelps). June.

Blephilia hirsuta (Pursh) Benth. (hairy).

Wood Mint.

Rare. Border of woods: Waterbury and Thomaston (A. E. Blewitt). June—July.

HEDEOMA Pers. Mock Pennyroyal.

Hedeoma pulegioides (L.) Pers. (like *Mentha Pulegium*, the Pennyroyal).

American Pennyroyal.

Common. Open or shaded ground, usually in dry soil. July—Aug.

The leaves and flowering tops as well as the oil distilled from them are officinal in medical practice and find many popular uses in home medication. The taste and odor are nearly the same as those of true Pennyroyal, *Mentha Pulegium* of Europe.

Hedeoma hispida Pursh (rough-hairy).

Rare. Putnam, dry plains near the Quinebaug River (Harger). June—Aug. Adventive from the West.

MELISSA L. Balm.

Melissa officinalis L. (of the shops).

Common or Lemon Balm.

Rare. Roadsides, yards and fields near old houses as an escape from cultivation: Ledyard and Lyme (Graves), New Haven (D. C. Eaton), Huntington, Trumbull, Fairfield and Norwalk (Eames). July—Sept. Native of Europe.

The leaves and tops are medicinal and were formerly officinal.

SATUREJA L. Savory. Calamint.

Satureja vulgaris (L.) Fritsch (common).

Clinopodium vulgare L.

Calamintha Clinopodium Benth.

Basil.

Frequent. Woods, fields and thickets. June—Sept.

HYSSOPUS L. Hyssop.**Hyssopus officinalis L.** (of the shops).

Hyssop.

Rare. Roadsides as an escape from cultivation: Salisbury (Mrs. C. S. Phelps). June — Sept. Native of Europe.

The plant is medicinal.

ORIGANUM L. Wild Marjoram.**Origanum vulgare L.** (common).

Wild Marjoram.

Rare or local. Dry pastures, roadsides and waste places: New Haven (O. Harger et al.), Sherman (E. H. Austin & Eames), Kent (C. K. Averill), Sharon (Bissell), Salisbury (Mrs. C. S. Phelps). July — Sept. Adventive from Europe.

PYCNANTHEMUM Michx. Mountain Mint. Basil.**Pycnanthemum clinopodioides Torr. & Gray** (like *Clinopodium*, the Basil).*Koellia clinopodioides* Kuntze.

Rare. Dry ground: Southington (Andrews), Cheshire (A. E. Blewitt), Hamden (O. Harger). Aug.

Pycnanthemum flexuosum (Walt.) BSP. (flexuous).*Pycnanthemum linifolium* Pursh.*Koellia flexuosa* MacM.

Occasional. Open sandy ground either dry or moist. July — Aug.

Pycnanthemum virginianum (L.) Durand & Jackson.*Pycnanthemum lanceolatum* Pursh.*Koellia lanceolata* MacM.

Wild Isaac.

Common. Sterile ground either dry or moist. July — Aug.

Pycnanthemum pilosum Nutt. (hairy).*Pycnanthemum muticum* Pers., var. *pilosum* Gray.*Koellia pilosa* Britton.

Rare. Edge of thicket in rather dry gravelly soil, Plainfield (Bissell & Weatherby). Aug.—Sept.

Pycnanthemum verticillatum (Michx.) Pers. (whorled).

Koellia verticillata Kuntze.

Rare or occasional. Hillsides and pastures either moist or dry. July — Aug.

Pycnanthemum incanum (L.) Michx. (hoary-white).

Koellia incana Kuntze.

Occasional. Rocky copses, thin woods and clearings. Aug.

Pycnanthemum muticum (Michx.) Pers. (pointless).

Koellia mutica Britton.

Frequent. Poor soils either dry or wet. July — Aug.

THYMUS L. Thyme.

Thymus Serpyllum L. (classical name for this plant).

Wild or Creeping Thyme.

Rare or occasional. Fields and waste places, usually in dry ground. June — Sept. Adventive from Europe.

Sometimes cultivated and used for seasoning in cookery.

LYCOPUS L. Water Horehound.

Lycopus virginicus L.

Bugle Weed.

Wet open ground or shaded swamps. Rare in most districts: Franklin (R. W. Woodward), Windsor (Bissell), Hartford (H. S. Clark). Occasional or frequent near the coast and in the southwestern part of the state. July — Sept.

The herb has medicinal properties, like other species of the genus.

Lycopus uniflorus Michx. (one-flowered).

Lycopus communis Bicknell.

Lycopus membranaceus Bicknell.

Bugle Weed.

Common. Wet or dry places in various soils. Aug.— Sept.

Lycopus sessilifolius Gray (sessile-leaved).

Rare. Wet ground about ponds: Voluntown, Ledyard, Groton and East Lyme (Graves), Old Saybrook and Middlebury (Harger). Aug.— Sept.

Lycopus rubellus Moench (reddish).

Rare. Low ground: Groton and New London (Graves).
Southington (Andrews, Bissell), Huntington (Harger). Aug.
— Sept.

Lycopus americanus Muhl.

Lycopus sinuatus Ell.

Frequent. Moist or wet places. Aug.— Sept.

MENTHA L. Mint.**Mentha longifolia** (L.) Huds. (long-leaved).

Mentha sylvestris L.

Horse Mint of Europe.

Rare. Fields and waysides: Ledyard (Graves), Milford
(Eames & C. C. Godfrey), Westport (Eames). July — Sept.
Naturalized from Europe.

Mentha alopecuroides Hull (like *Stachys Alopecuros*, the
Betony).

Mentha sylvestris L., var. *alopecuroides* Baker.

Rare. Roadsides in Fairfield (Eames). Aug.— Sept.
Adventive from Europe.

Mentha spicata L. (spiked).

Mentha viridis L.

Spearmint.

Frequent. Fields and roadsides in wet ground. July —
Sept. Naturalized from Europe.

The leaves and flowering tops as well as the oil distilled
from them are officinal in medical practice and are in popular
use. The herb is used in sauce for roast lamb, etc.

Mentha piperita L. (peppery).

Peppermint.

Occasional. Wet places. Aug.— Sept. Naturalized from
Europe.

The source of oil of peppermint. Like the preceding
species officinal, much used in medical practice and as a flavor
for confectionery.

Mentha aquatica L. (aquatic).

Water Mint.

Rare or local. Moist ground: New London (Graves), Southbury (T. M. Prudden), Litchfield (T. M. Allen). Aug.—Sept. Adventive from Europe.

***Mentha crispa* L. (curled).**

Mentha aquatica L., var. *crispa* Benth.

Curled Mint.

Rare or local. Roadsides: Norwich (Mrs. E. E. Rogers), New London, Ledyard and Preston (Graves), Stratford (Eames, Harger), Waterbury (Mrs. C. H. Lyman), Oxford (Harger), Bridgeport (Eames). Aug.—Sept. Adventive from Europe.

Properties similar to those of peppermint. Often cultivated both for ornament and use.

***Mentha citrata* Ehrh. (like *Citrus Limonum*, the Lemon; referring to its odor).**

Bergamot Mint.

Rare. Roadsides and waste places in moist ground: East Hartford (Weatherby), Rocky Hill (Mrs. F. W. Starmer), Oxford (Harger), Litchfield (T. F. Allen), Salisbury (Mrs. C. S. Phelps). Aug.—Sept. Adventive from Europe.

***Mentha Cardiaca* Gerarde (of the heart).**

Mentha sativa of many American authors.

Rare. Southington, wet ground (Andrews & Bissell). Aug.—Sept. Adventive from Europe.

***Mentha gentilis* L. (related).**

Mentha sativa L.

Spotted or Whorled Mint. Runaway Robin.

Rare. Roadsides, waste places and about old houses: Ledyard and Preston (Graves), Union and Salisbury (Bissell), Bolton (Weatherby), Plainville (J. N. Bishop), Southington (Andrews & Bissell), Bridgeport, Fairfield, Newtown and Sherman (Eames). July — Sept. Naturalized from Europe.

***Mentha arvensis* L. (of cultivated ground).**

Field Mint.

Occasional. Low fields and wet places. July — Sept.

Mentha arvensis L., var. **canadensis** (L.) Briquet.*Mentha canadensis* L.

Wild Mint.

Frequent. Wet places, often along streams. July — Sept.

COLLINSONIA L. Horse Balm.**Collinsonia canadensis** L.

Richweed. Stone-root.

Common. Moist rich woods. July — Sept.

The root and herb are used in medicine.

PERILLA L.**Perilla frutescens** (L.) Britton (shrubby).*Perilla ocymoides* L.

Rare. About old gardens as an escape from cultivation: Groton (Mrs. C. B. Graves), Southington (Andrews), Oxford (Harger), Bridgeport (Eames). July — Sept. Native of Asia.

Sometimes cultivated as a foliage plant.

SOLANACEAE. NIGHTSHADE FAMILY.**CAPSICUM** L. Pepper.**Capsicum annuum** L. (annual).

Red, Cayenne or Chili Pepper.

Rare. Waste ground: Hartford (H. S. Clark), Bridgeport (Eames). July — Aug. Fugitive from the Tropics.

Well known in cultivation.

LYCOPERSICUM Mill. Tomato.**Lycopersicum esculentum** Mill. (edible).*Lycopersicon Lycopersicon* Karst.

Tomato.

Rare. An escape in waste places and on river shores. Aug.—Sept. Introduced from South America.

Cultivated for its edible fruit.

SOLANUM L. Nightshade.**Solanum tuberosum** L. (producing tubers).

Potato.

Rare. Cultivated ground and waste places. July. Fugitive from temperate South America.

One of the important food plants of the world.

***Solanum Dulcamara* L. (bitter-sweet).**

Woody Nightshade. Bittersweet. Wolf Grape. Violet Bloom.

Frequent. Moist or wet thickets, waste grounds, roadsides, about ponds and along streams. June — Aug.; fruit July — Sept. Naturalized from Europe.

The young branches and leaves are sometimes used medicinally and were formerly officinal. The berries are somewhat poisonous.

***Solanum nigrum* L. (black).**

Black or Common Nightshade.

Frequent. Moist rich soil or often in drier places or on sea beaches. July — Sept.; fruit Aug. — Oct.

Stock are sometimes poisoned by eating this plant. All parts of the plant are said to be more or less poisonous. This plant has recently been somewhat extensively advertised in seed catalogues as Garden Huckleberry, and it is claimed the ripe berries are entirely safe and wholesome either fresh or cooked. The testimony is somewhat conflicting.

It is stated that in some countries the leaves are eaten as a pot-herb after thorough cooking; that in the Dakotas the plant is called Stubbleberry, and the ripe fruit is much used for making pies and preserves.

On the other hand the best chemical authorities state that active poisonous principles have been found in the ripe berries as well as in other parts of the plant. The species is quite variable, and it is probable that some plants are more poisonous than others, in consequence of conditions of growth not yet understood.

All things considered, its indiscriminate use as a food plant cannot be recommended.

***Solanum carolinense* L.**

Horse or Bull Nettle. Sand Brier.

Rare. Fields and meadows: Middletown (Bissell), Nau-

gatuck (A. E. Blewitt), Seymour (Harger), Milford and Bridgeport (Eames), Norwalk (G. P. Ells), Salisbury (Mrs. C. S. Phelps), New Milford (E. H. Austin), Greenwich (J. W. Robbins). July — Sept.; fruit Aug. — Oct. Naturalized from the South.

A pernicious weed in the South, destructive to cattle. The root and leaves are employed medicinally.

***Solanum rostratum* Dunal (beaked).**

Sand Bur. Buffalo Bur.

Rare. Waste or cultivated ground: New London (Miss E. Shelly), Hartford and East Haddam (Dr. E. J. Thompson), Southington (Miss L. Upson, Andrews), Naugatuck (B. B. Bristol), Milford (Harger), Wilton (Miss A. E. Carpenter), Kent and New Milford (E. H. Austin), Salisbury (Mrs. C. S. Phelps). July — Sept. Adventive from the West.

A pernicious weed which should be eradicated on its first appearance.

PHYSALIS L. Ground Cherry.

***Physalis angulata* L. (angular).**

Rare. Hartford, in waste ground (H. S. Clark & Bissell). July — Sept. Fugitive from the South.

***Physalis pruinosa* L. (frosted).**

Strawberry Tomato.

Cultivated or waste ground. Rare in most districts: Norwich (Mrs. E. E. Rogers), Groton (Mrs. C. B. Graves), Southington (Andrews & Bissell). Occasional in the southwestern part of the state (Eames). July — Oct.

***Physalis Alkekengi* L.**

Winter Cherry.

Rare. New Milford, spreading from cultivation (E. H. Austin). Fruit Aug. — Oct. Introduced from eastern Asia.

***Physalis heterophylla* Nees (various-leaved).**

Physalis virginiana Gray's Manual ed. 6, not Mill.

Occasional. Dry fields and waste places. June — Sept.; fruit Aug. — Oct.

The var. **AMBIGUA** (Gray) Rydb. (doubtful) sometimes occurs with the typical form.

The var. *NYCTAGINEA* (Dunal) Rydb. (like the Four-o'clock) is rare: Windsor, shaded alluvial soil on bank of the Connecticut River (Bissell).

Physalis subglabrata Mackenzie & Bush (nearly smooth).

Physalis philadelphica Gray's Manual ed. 6, perhaps not Lam.

Rare. Waste grounds, roadsides and fields: East Windsor and Norwalk (Bissell), Bridgeport (Eames), Waterbury (A. E. Blewitt), New Milford (Eames & E. H. Austin), Salisbury (Mrs. C. S. Phelps). July—Sept.

Sometimes cultivated for its edible fruit.

Physalis virginiana Mill.

Physalis lanceolata Gray's Manual ed. 6 in part, not Michx.

Rare. Dry or moist fields: Southington (Andrews), Southbury (Harger). June—Aug.

NICANDRA Adans. Apple of Peru.

Nicandra physalodes (L.) Pers. (like *Physalis*, the Ground Cherry).

Physalodes physalodes Britton.

Apple of Peru.

Rare. Waste ground and cultivated fields: Norwich (Mrs. E. E. Rogers), Southington (Andrews), New Haven (O. Harger), Waterbury (H. S. Clark), Oxford and Ansonia (Harger), Bridgeport and Norwalk (Eames), Winchester (A. E. Blewitt), Norfolk (H. S. Clark & Bissell). July—Sept. Adventive from Peru.

LYCIUM L. Matrimony Vine.

Lycium halimifolium Mill. (having leaves like *Atriplex Halimus*, the Orach).

Lycium vulgare Dunal.

Common Matrimony Vine.

Rare or local. Roadsides and about old houses. May—Sept.; fruit Aug.—Oct. Adventive from Europe.

DATURA L. Jamestown or Jimson Weed. Thorn Apple.

Datura Stramonium L. (old name for this species).

Stramonium. Jimson Weed. Thorn Apple.

Rare or occasional. Waste places, mostly in rich soil.
July — Oct.; fruit Oct. Naturalized, probably from Asia.

The leaves are officinal and with the seeds are valued in medicine. The plant is poisonous. In numerous instances children have been killed by eating the seeds.

Datura Tatula L. (Persian name for this species).

Purple Stramonium. Jimson Weed. Purple Thorn Apple.

Rich waste places and on sea beaches. Occasional, becoming frequent or common in villages and cities. July — Oct.: fruit Oct. Naturalized from tropical America.

Poisonous and medicinal like *Datura Stramonium*.

Datura Metel L. (Arabic name for this species).

Rare. Waste ground: New Haven (H. S. Clark), Bridgeport (Eames). July — Oct.; fruit Oct.

Fugitive from tropical America.

A narcotic poison.

Datura meteloides DC. (like *Datura Metel*).

Rare. Waste ground: Southington, two plants seen for a single season (Bissell & Andrews). Aug.—Sept. Fugitive from tropical America.

A narcotic poison. Sometimes cultivated for ornament.

NICOTIANA L. Tobacco.

Nicotiana rustica L. (of the country).

Wild Tobacco.

Rare. New Haven, waste fields (F. W. Hall, 1873), New London (Graves). Aug. — Sept. A fugitive, its nativity unknown, but formerly cultivated by the Indians.

Nicotiana alata Link & Otto (winged).

Rare. Waste places: Bridgeport, several stations (Eames), Southington (Andrews). Aug.—Sept. Native of South America.

Often cultivated as an ornamental plant.

Nicotiana Tabacum L. (Indian name).

Tobacco.

Rare. Waste ground: Bridgeport and Fairfield (Eames). Aug.—Sept. Fugitive from South America.

Well known in cultivation.

PETUNIA Juss.

Petunia axillaris (Lam.) BSP. (growing in an axil).

White Petunia.

Rare. Waste places: New London (Graves), Southington (Andrews), Ansonia (Harger), Bridgeport and Norwalk (Eames). July — Sept. Fugitive or in part adventive from tropical America.

Commonly cultivated for ornament.

Petunia violacea Lindl. (violet).

Purple Petunia.

Rare. Waste ground: New London (Graves), Oxford (Harger), Bridgeport (Eames). July — Sept. Fugitive or in part adventive from South America.

Cultivated. Most of the forms in cultivation are hybrids of this species with *Petunia axillaris*.

SCROPHULARIACEAE. FIGWORT FAMILY.**VERBASCUM** L. Mullein.

Verbascum Thapsus L. (classical name for this species).

Common Mullein. Velvet Dock. Flannel-leaf.

Frequent or common. Dry fields, pastures and newly cleared land. June — Oct. Naturalized from Europe.

The leaves, tops and flowers are used medicinally, and the leaves are often dried and smoked like tobacco for respiratory affections.

Verbascum phlomoides L. (like *Phlomis*, the Jerusalem Sage).

Rare. Granby, a few plants in grassland (I. Holcomb). July. Fugitive from Europe.

Verbascum Blattaria L. (classical name for this species).

Moth Mullein.

Occasional. Fields, mostly in grassland and in dry soil. June — Sept. Naturalized from Europe.

The var. *ALBIFLORUM* Kuntze (white-flowered) sometimes occurs with the species.

Medicinal, having the same properties as *Verbascum Thapsus*.

Verbascum Pseudo-Lychnitis Schur (simulating *Verbascum Lychnitis*).

Rare. Kent, a few plants in grassland (Miss J. T. Gregory). Aug. Fugitive from Europe.

LINARIA Hill. Toadflax.

Linaria vulgaris Hill (common).

Linaria Linaria Karst.

Ramsted. Butter and Eggs.

Common. Fields, roadsides and waste places. June—Oct. Naturalized from Europe.

A troublesome weed, difficult to eradicate. Medicinal.

Linaria canadensis (L.) Dumont.

Blue Toadflax.

Common. Dry to moist mostly sterile or sandy soil. May—Sept.

A part of the flowers are usually cleistogamous, sometimes all of them.

Linaria minor (L.) Desf. (smaller).

Chaenorrhinum minus Lange.

Rare. Stamford, in waste ground (W. H. Hoyt). June—Aug. Fugitive from Europe.

Linaria Elatine (L.) Mill. (classical name for some kind of Toadflax).

Kickxia Elatine Dumont.

Elatinoides Elatine Wettst.

Rare. There is in the Eaton Herbarium a specimen of this species collected in Connecticut by Charles Wright, but the exact locality is not known. Not otherwise reported from the state. June—Sept. Fugitive from Europe.

Linaria Cymbalaria (L.) Mill. (like a cymbal).

Cymbalaria Cymbalaria Wettst.

Kenilworth or Coliseum Ivy.

Rare. Roadsides, waste places and on walls: Norwich, Groton and New London (Graves), Windham (Bissell), Bridgeport (Eames), Fairfield (Mrs. Mabel Osgood Wright, Eames), Seymour (Harger). June—Sept. Adventive from Europe.

ANTIRRHINUM L. Snapdragon.**Antirrhinum Orontium L.**

Small Snapdragon.

Rare. Bridgeport, one plant in waste ground (Eames).

June. Fugitive from Europe.

SCROPHULARIA L. Figwort.**Scrophularia marilandica L.**

Scrophularia nodosa L., var. *marilandica* Gray.

Figwort. Scrofula Plant.

Fields and thickets. Rare east of the Connecticut River: Franklin (R. W. Woodward). Occasional or frequent in the western part of the state. July—Sept.

The herb and root are medicinal in both this and the following species.

Scrophularia leporella Bicknell (a little hare).

Occasional or frequent. Fields, thickets and fence-rows.

Late May—early July.

A form of this with deeply laciniate leaves occurs at Bridgeport (H. S. Clark).

PENTSTEMON Ait. Beard-tongue.**Pentstemon hirsutus** (L.) Willd. (hairy).

Pentstemon pubescens Ait.

Dry fields and banks. Frequent in Litchfield County; rare, occasional or local in other parts of the state. Late May—early July.

Pentstemon tubiflorus Nutt. (tubular-flowered).

Rare. Pastures and grassland: Granby (I. Holcomb),

Sharon (Bissell), Kent (H. Mosher), Salisbury (Mrs. C. S. Phelps). June—July. Adventive from the West.

Pentstemon laevigatus Ait. (smoothed).

Pentstemon Pentstemon Britton.

Rare or occasional. Wet or dry grassland and waste places. June—early July. Adventive from the West.

Pentstemon laevigatus Ait., var. **Digitalis** (Sweet) Gray (like *Digitalis*, the Foxglove).

Pentstemon Digitalis Nutt.

Pentstemon calycosus Small.

Occasional, frequent or common. Moist or dry grassland.
June — early July. Introduced from the West.

Pentstemon grandiflorus Nutt. (large-flowered).

Rare. Granby, a few plants in a field (I. Holcomb).
June. Fugitive from the West.

CHELONE L. Turtlehead. Snakehead.

Chelone glabra L. (smooth).

Turtlehead. Snakehead. Balmony.

Frequent. Wet places. Aug.—Sept.

The leaves and tops are medicinal.

MIMULUS L. Monkey Flower.

Mimulus ringens L. (gaping).

Frequent. Wet thickets and open places. July — Sept.

Mimulus alatus Ait. (winged).

Rare. Wet places and banks of streams: Lyme (Bissell),
East Hartford (J. F. Smith), Hartford (H. S. Clark), Stam-
ford (W. H. Hoyt). July — Sept.

Mimulus Langsdorffii Donn.

Mimulus luteus Gray's Manual ed. 6, not L.

Mimulus guttatus DC.

Yellow Monkey Flower.

Rare or local. Wet ground along brooks: Norfolk (J. H.
Barbour), New Milford (Miss J. T. Gregory). June — Aug.
Adventive from the Pacific Coast.

LIMOSELLA L. Mudwort.

Limosella aquatica L. (aquatic), var. **tenuifolia** (Wolf) Pers.
(slender-leaved).

Limosella tenuifolia Wolf.

Mudwort.

Occasional on muddy tidal shores. June — Oct.

ILYSANTHES Raf. False Pimpernel.

Ilysanthes dubia (L.) Barnhart (doubtful).

Ilysanthes riparia Gray's Manual ed. 6 in part, and perhaps
of Raf.

Ilysanthes gratioloides Benth.

Ilysanthes attenuata Small.

Frequent. Wet muddy or sandy open places and about ponds and streams. June — Sept.

Ilysanthes anagallidea (Michx.) Robinson (like *Anagallis*, the Pimpernel).

Ilysanthes dubia of American authors, not *Gratiola dubia* L.

Ilysanthes riparia Raf. (?).

Wet muddy or sandy places. East Haddam (Eaton Herb.), and occasional in the southwestern part of the state (Eames). June — Sept.

GRATIOLA L. Hedge Hyssop.

Gratiola virginiana L.

Common. Wet places. June — Sept.

The plant is medicinal.

Gratiola aurea Muhl. (golden).

Lake and river shores. Monroe (H. C. Beardslee), and occasional or frequent in central and eastern Connecticut. June — Sept.

DIGITALIS L. Foxglove.

Digitalis purpurea L. (purple).

Common Foxglove.

Rare. Bridgeport, in waste places (Eames). June — July.

Fugitive from Europe.

VERONICA L. Speedwell.

Veronica virginica L.

Leptandra virginica Nutt.

Culver's-root. Culver's Physic.

Occasional to frequent. Fields, thickets and fence-rows.

July — Aug.

The rhizome and roots are medicinal and are officinal.

Veronica longifolia L. (long-leaved).

Rare. Roadsides as an escape from cultivation: Waterford (E. F. Burleson), Union (Bissell), Milford and Fairfield (Eames). July — Aug. Native of Europe.

Veronica americana Schwein.

American Brooklime.

Springs and wet places. Windsor (Eames & Harger),

Southington (Andrews & Bissell), and occasional throughout the western part of the state. May — Aug.

Medicinal. Said to be also used as a salad plant.

Veronica scutellata L. (platter-like, in allusion to the flat flowers).

Swamp or Marsh Speedwell.

Occasional or frequent. Wet places. May — Oct.

Veronica officinalis L. (of the shops).

Speedwell. Paul's Betony. Common Speedwell.

Common. Dry fields and woods. May — June.

The plant has medicinal uses.

Veronica Chamaedrys L. (classical name for Germander).

Bird's-eye.

Rare. In grassland: New London (Graves), Norfolk (Miss M. C. Seymour). May — June. Adventive from Europe.

Veronica Teucrium L. (like the Germander).

Rare. Fairfield, grassy roadside (Eames), Salisbury (Mrs. C. S. Phelps). June. Native of Europe.

The plant is medicinal.

Veronica serpyllifolia L. (thyme-leaved).

Creeping or Thyme-leaved Speedwell.

Frequent or common. Fields and thickets, usually in moist, but sometimes in dry soil. May — July.

Often troublesome as a weed in lawns.

Veronica peregrina L. (foreign).

Neckweed. Purslane Speedwell.

Frequent. Cultivated and waste ground either dry or moist. April — June.

Medicinal, resembling *Veronica officinalis* in its properties. Sometimes troublesome as a weed.

Veronica arvensis L. (of cultivated ground).

Corn Speedwell.

Occasional or frequent. Along the shore a weed in cultivated ground or along sandy roadsides; inland mostly in dry

rocky woods or on ledges. May—June. Naturalized from Europe.

Medicinal like *Veronica officinalis*.

Veronica Tournefortii C. C. Gmel.

Veronica Buxbaumii Tenore.

Veronica byzantina BSP.

Rare. Cultivated or waste ground: Oxford (Harger), Litchfield (Miss E. H. Thompson). April—Nov. Adventive from Europe.

Veronica hederæfolia L. (ivy-leaved).

Ivy-leaved Speedwell.

Rare. Norfolk, introduced along roadsides (Miss M. C. Seymour). April—June. Fugitive from Europe.

GERARDIA L. Gerardia.

Gerardia pedicularia L. (like *Pedicularis*, the Lousewort).

Dasystoma pedicularia Benth.

Lousewort.

Occasional. Dry sandy or rocky woods and fields. Aug.—Sept.

The plant is medicinal.

Gerardia flava L. (yellow).

Dasystoma flava Wood.

Downy Yellow or False Foxglove.

Frequent. Dry woods and thickets. July—Sept.

Gerardia virginica (L.) BSP.

Gerardia quercifolia Pursh.

Dasystoma virginica Britton.

Oak-leaved or Smooth False Foxglove.

Dry woods. Occasional, becoming frequent near the coast. Aug.—Sept.

This and the preceding species are root-parasitic.

Gerardia purpurea L. (purple).

Purple Gerardia.

Frequent along the coast in moist fields and borders of marshes. Aug.—Oct.

Gerardia paupercula (Gray) Britton (stunted).*Gerardia purpurea* L., var. *paupercula* Gray.

Wet sandy places. Rare inland: Thompson (Weatherby & Bissell), Union and Salisbury (Bissell), East Hartford and Simsbury (Weatherby), Enfield and Southington (Andrews & Bissell), Litchfield (Miss E. H. Thompson). Occasional or frequent along the coast. Aug.—Oct.

Gerardia maritima Raf. (of the seaside).Seaside *Gerardia*.

Occasional or local on the coast in salt marshes. Aug.—Oct.

Gerardia tenuifolia Vahl (slender-leaved).*Gerardia Gattingeri* Small.*Gerardia*.

Frequent or common. Woods, thickets and fields, mostly in dry soils. Aug.—Sept.

The var. *MACROPHYLLA* Benth. (large-leaved), *Gerardia Besseyana* Britton, occurs at Wethersfield (C. Wright), and at Orange (Bissell).

Gerardia parvifolia Chapman (small-leaved).*Gerardia Skinneriana* Gray's Manual ed. 6, not Wood.

Rare. Farmington, in sandy woods (Miss C. A. Shepard). Aug.—Sept.

CASTILLEJA Mutis. Painted Cup.**Castilleja coccinea** (L.) Spreng. (scarlet).

Scarlet Painted Cup. Meadow Pink. Nosebleed. Headache Plant. Soldiers on the Green.

Occasional, local or frequent. Wet meadows and pastures. April—June.

The root was formerly used in medicine. The species is root-parasitic. Sometimes seen with yellow flowers.

MELAMPYRUM L. Cow Wheat.**Melampyrum lineare** Lam. (very narrow).*Melampyrum americanum* Michx.

Cow Wheat.

Common. Dry woods. June — Aug.

PEDICULARIS L. Lousewort.**Pedicularis canadensis L.**

Common Lousewort. Wood Betony. Greaseweed.

Frequent or common. Fields and woods in either dry or moist ground. May—June.

Pedicularis lanceolata Michx. (lance-shaped).

Swamp Lousewort.

Bogs and wet meadows. Rare, occasional or local in most parts of the state, but not reported from Fairfield County. Aug.—Sept.

RHINANTHUS L. Yellow Rattle.**Rhinanthus Crista-galli L.** (cock's-comb).

Rhinanthus minor Ehrh.

Rattle. Yellow Rattle. Rattle-box.

Local. Fields and meadows, either moist or dry: North Branford and New Haven (Harger), Cheshire (Miss Hotchkiss), Waterbury (Eaton Herb.), and occasional westward and southward as far as Milford (W. A. Setchell, H. S. Clark, Eames), and Stratford (Eames). May—June.

SCHWALBEA L. Chaff-seed.**Schwalbea americana L.**

Chaff-seed.

Rare. East Lyme, gravelly roadside (Mrs. C. B. Graves). May—July.

LENTIBULARIACEAE.**BLADDERWORT FAMILY.****UTRICULARIA L.** Bladderwort.**Utricularia inflata Walt.** (inflated).

In still water. Rare in most districts: Mansfield (Weatherby), Windsor (A. W. Driggs & Weatherby), Bristol (J. N. Bishop). Occasional in New London County (Graves). July—Sept.

Utricularia clandestina Nutt. (secret).

Rare. Muddy pools or shores: Waterford (Graves), Fairfield (L. N. Johnson). July.

***Utricularia vulgaris* L. (common), var. *americana* Gray.**

Utricularia vulgaris of Manuals in part.

Greater Bladderwort.

Occasional or local. Still water or slow streams. June—Aug.

***Utricularia minor* L. (lesser).**

Smaller Bladderwort.

Rare. In still water: East Lyme (Miss A. M. Ryon), New Haven (Eaton Herb.), Fairfield, Milford and Ridgefield (Eames), Easton (Eames & C. C. Godfrey), Salisbury (Mrs. C. S. Phelps). May—June.

***Utricularia gibba* L. (humped).**

Rare, local or occasional. Shallow water or mud about swamps, pools and ponds. July—Oct.

***Utricularia biflora* Lam. (two-flowered).**

Rare. Ponds and pools: Groton (Graves), Southington (Andrews). July—Sept.

***Utricularia intermedia* Hayne (intermediate).**

Sphagnum bogs and borders of ponds. Rare in northern districts, becoming occasional in the southern part of the state. May—July.

The flowers are seldom seen.

***Utricularia purpurea* Walt. (purple).**

Purple Bladderwort.

In ponds. Rare or local in most districts: Middlebury (Harger), Mansfield (Weatherby), Guilford (G. H. Bartlett). Occasional near the coast in New London County (Graves). Aug.

***Utricularia resupinata* B. D. Greene (bent backward).**

Rare. East Lyme, at Dodge's Pond (Graves), Woodbury, in a sphagnum bog (B. B. Bristol et al.). July—Sept.

***Utricularia cornuta* Michx. (horned).**

Muddy or sphagnum bogs. Salisbury (Bissell), Norfolk (J. W. Robbins, J. H. Barbour), Woodbury, Bethany and Kent (Harger), Southington (Andrews), and occasional in New London County (Graves). Aug.

OROBANCHACEAE. BROOM-RAPE FAMILY.**EPIFAGUS** Nutt. Cancer-root. Beech-drops.**Epifagus virginiana** (L.) Bart.*Leptamnium virginianum* Raf.

Beech-drops.

Occasional. Dry woods, under beech trees. Aug.—Sept.

The earlier flowers are cleistogamous. Medicinal.

CONOPHOLIS Wallr. Squaw-root. Cancer-root.**Conopholis americana** (L. f.) Wallr.

Cancer-root.

Rare. Rich woods: Plainville (J. N. Bishop), Southington (Andrews & Bissell), Guilford (G. H. Bartlett), New Haven (Eaton Herb.). June.

OROBANCHE L. Broom-rape.**Orobanche uniflora** L. (one-flowered).*Aphyllon uniflorum* L. Gray.*Thalesia uniflora* Britton.

One-flowered Cancer-root.

Occasional or frequent. Dry or moist woods and thickets, sometimes in fields or by roadsides. May—June.

The plant is medicinal.

BIGNONIACEAE. BIGNONIA FAMILY.**TECOMA** Juss. Trumpet-flower.**Tecoma radicans** (L.) Juss. (rooting).

Trumpet Creeper.

Rare or local. Roadsides and thickets as an escape from cultivation. Aug.—Sept. Adventive from the South.

Cultivated for ornament. In the South it becomes a pernicious weed in cultivated ground.

CATALPA Scop. Indian Bean. Catalpa.**Catalpa bignonioides** Walt. (like Bignonia).*Catalpa Catalpa* Karst.

Catalpa. Candle or Bean Tree.

Rare. Fields and roadsides as an escape from cultivation: Norwich and New London (Graves), Southington (An-

draws), Huntington and Southbury (Harger), Bridgeport (Eames). June. Adventive from the Gulf States.

Planted for ornament and valuable farther south for its timber.

MARTYNIACEAE. MARTYNIA FAMILY.

MARTYNIA L. Unicorn-plant.

Martynia louisiana Mill.

Martynia proboscidea Gloxin.

Unicorn-plant. Proboscis Flower.

Rare. Cultivated ground: Oxford (Harger). July — Oct. Fugitive from the Southwest.

The young pods are used for pickling.

PHRYMACEAE. LOPSEED FAMILY.

PHRYMA L. Lopseed.

Phryma Leptostachya L. (slender-spiked).

Lopseed.

Occasional. Rich woods and thickets. July — Aug.

PLANTAGINACEAE. PLANTAIN FAMILY.

PLANTAGO L. Plantain. Ribwort.

Plantago major L. (larger).

Common Plantain.

Common. Fields, waste places and especially along paths and roadsides. June — Sept.

The var. *INTERMEDIA* (Gilib.) Dcne. (intermediate), *Plantago halophila* Bicknell, is frequent on the borders of salt marshes and rarely occurs inland.

The leaves and root are medicinal. The young leaves are used as a pot-herb. An unsightly and pernicious weed in lawns.

Plantago Rugelii Dcne.

Plantain.

Common. Moist fields, yards, thickets and woods. June — Aug.

The young leaves are used as a pot-herb.

Plantago decipiens Barneoud (deceiving).

Plantago maritima Gray's Manual ed. 6, not L.

Seaside Plantain.

Occasional to common in salt marshes and on tidal shores.

July — Oct.

Plantago lanceolata L. (lance-shaped).

English Plantain. Rib Grass. Ripple Grass.

Common. Fields, roadsides and waste ground. May — Sept. Naturalized from Europe.

A troublesome weed. The plant is medicinal.

Plantago aristata Michx. (bearing bristles).

Plantago patagonica Jacq., var. *aristata* Gray.

Occasional. Dry fields and roadsides. June — Aug. Introduced from the West and becoming more frequent.

Plantago virginica L.

Dry rocky or sandy soil. Rare or local in most districts: Rocky Hill (M. Hitchcock), New Haven and Oxford (Harger), Norwalk (Miss A. E. Carpenter, Eames), New Milford (E. H. Austin). Occasional in New London County (Graves). May — June.

Plantago elongata Pursh (lengthened).

Plantago pusilla Nutt.

Rare. Old Lyme, sandy roadside (Bissell), Guilford, thin soil on the edges of granite outcrops (G. H. Bartlett). May.

RUBIACEAE. MADDER FAMILY.**ASPERULA L.****Asperula glauca** (L.) Bess. (glaucous).

Asperula galioides Bieb.

Woodruff.

Rare. Southington, in fields (Bissell). June. Adventive from Europe.

GALIUM L. Bedstraw. Cleavers.**Galium Aparine** L. (classical name for some species of Bedstraw).

Cleavers. Goose Grass.

Frequent. Moist thickets and waste places. May—June.
The plant is medicinal.

***Galium verum* L. (true).**

Yellow Bedstraw.

Rare. Fields and waste ground: Waterford (Graves), Guilford (G. H. Bartlett), Plainville (C. D. Bishop), Naugatuck (B. B. Bristol), Huntington (Eames), Stratford (Mrs. R. H. Russell), Norfolk (Miss M. C. Seymour), Southbury (Weatherby & Harger), Monroe (Eames & C. C. Godfrey), Stamford (W. H. Hoyt), Salisbury (Mrs. C. S. Phelps).
June—July. Adventive from Europe.

***Galium Wirtgenii* F. Schultz.**

Rare. Norfolk, in grassland (Miss M. C. Seymour).
June. Fugitive from Europe.

***Galium pilosum* Ait. (hairy).**

Frequent. Dry soil of woods and fields. July—Aug.

***Galium pilosum* Ait., var. *puncticulosum* (Michx.) Torr. & Gray (minutely punctate).**

Rare. Dry ground: South Windsor (A. W. Driggs).
July—Aug.

***Galium circaezans* Michx. (imitating *Circaea*, the Enchanter's Nightshade).**

Wild Liquorice.

Occasional or frequent. Rich woods. June—July.

***Galium lanceolatum* Torr. (lance-shaped).**

Wild Liquorice.

Rich woods. Rare in New London County: Norwich (Mrs. E. E. Rogers), Ledyard and Salem (Graves). Becoming occasional to frequent northward and westward. June—July.

***Galium boreale* L. (northern).**

Northern Bedstraw.

Fields and rocky banks. Farmington (Miss Willard), New Britain (Bissell), Derby (Harger), Milford (Eames), and occasional northwestward. June—July.

***Galium Mollugo* L. (classical name for some bur-bearing plant).**

Wild Madder.

Rare. Roadsides and grassland: East Haddam (Dr. E. J. Thompson), Granby (I. Holcomb), Southington and Winchester (Bissell), Bridgeport, Fairfield and Westport (Eames). June—July. Naturalized from Europe.

The plant is medicinal.

Galium erectum Huds. (erect).

Rare. Grassy fields: Plainville (Bissell), Southington (Andrews & Bissell), Westport (Eames), Norwalk (Eames & C. C. Godfrey), Salisbury (Mrs. C. S. Phelps). May—June. Adventive from Europe.

Galium palustre L. (of marshes).

Rare or local. Swamps: New London (Graves), Lyme (Graves, Harger), Plainville and Southington (Bissell), Litchfield (Bissell & Weatherby). June—July.

Galium trifidum L. (three-cleft).

Galium trifidum L., var. *pusillum* Gray.

Rare. Cold swamps: Norfolk and Sharon (Bissell), Salisbury (Mrs. C. S. Phelps & Bissell). July—Aug.

Galium Claytoni Michx.

Galium trifidum Gray's Manual ed. 6 in part.

Frequent. Swamps and bogs. June—Aug.

Galium tinctorium L. (used for dyeing).

Galium trifidum L., var. *latifolium* Torr.

Frequent. Bogs and swamps. June—July.

Galium labradoricum Wiegand.

Galium tinctorium L., var. *labradoricum* Wiegand.

Rare. Larch swamps: Norfolk (H. S. Clark & Bissell), Salisbury (M. L. Fernald). Late May—June.

Galium asprellum Michx. (slightly rough).

Rough Bedstraw.

Frequent. Swamps and borders of streams. July.

Galium triflorum Michx. (three-flowered).

Sweet-scented Bedstraw.

Frequent. Dry woods, often in rocky ground. June—Aug.

DIODIA L. Buttonweed.

Diodia teres Walt. (rounded).

Rare or local. Beaches along the coast and in dry sandy

fields: Old Saybrook (Bissell), New Haven (O. Harger), Bridgeport (L. N. Johnson), Fairfield, plentiful on the beach (Eames), Sherman, introduced in grassland (Eames, E. H. Austin & J. Pettibone). July — Oct.

MITCHELLA L. Partridge Berry.

Mitchella repens L. (creeping).

Partridge Berry. Squaw Vine. Checkerberry.

Frequent or common. Rich woods. June — July; fruit Sept., persisting through the winter.

The berries are edible but insipid. A form with white berries is reported from Canaan. The plant is medicinal and was formerly much used by Indian squaws.

CEPHALANTHUS L. Buttonbush.

Cephalanthus occidentalis L. (western).

Buttonbush.

Common. Shallow water of ponds, swamps and ditches.

July — Aug.

The bark is medicinal.

HOUSTONIA L.

Houstonia caerulea L. (sky-blue).

Bluets. Innocence. Mayflower.

Common. Fields and woods, mostly in moist ground.

April — June.

Houstonia longifolia Gaertn. (long-leaved).

Houstonia purpurea L., var. *longifolia* Gray.

Rare or local. Dry ground: Ledyard (Mrs. C. B. Graves), Norwich (Mrs. E. E. Rogers), Waterford (Miss Crofton), East Lyme (Mrs. F. H. Dart & Miss Bond), Sprague (Miss Smith), Granby (I. Holcomb), Oxford (Harger), Salisbury (Mrs. C. S. Phelps). June — July.

Houstonia lanceolata (Poir.) Britton (lanceolate).

Houstonia purpurea L., var. *calycosa* Gray.

Rare. Upland meadow in Wilton (Miss M. K. Jennings). June — July. Adventive from the West or possibly native.

CAPRIFOLIACEAE. HONEYSUCKLE FAMILY.

DIERVILLA Adans. Bush Honeysuckle.

Diervilla Lonicera Mill. (like *Lonicera*, the Honeysuckle).

Diervilla trifida Moench.

Diervilla Diervilla MacM.

Bush Honeysuckle.

Frequent. Dry or moist woods and on banks. May—July.

Medicinal.

LONICERA L. Honeysuckle.

Lonicera caerulea L. (sky-blue), var. *villosa* (Michx.) Torr. & Gray (hairy).

Lonicera caerulea of Gray's Manual ed. 6, not L.

Mountain Fly Honeysuckle.

Swamps and low or rocky pastures and thickets. Plainville (J. N. Bishop), Griswold and Voluntown (Graves); and occasional or even common in northeastern Connecticut, where it is sometimes troublesome in pastures and is locally known as Hardhack. May—June; fruit June—July.

The berries are edible, resembling the blueberry in flavor.

Lonicera tatarica L.

Tartarian Honeysuckle.

Rare. Roadsides as an escape from cultivation: Fairfield (Eames), Redding (Eames & C. C. Godfrey), Cornwall (H. S. Clark & Bissell). May. Introduced from Asia.

Lonicera canadensis Marsh.

Lonicera ciliata Muhl.

American Fly Honeysuckle.

Dry rocky woods. Old Lyme (Graves), North Branford (A. W. Evans), Middletown (L. N. Johnson), Meriden (Eaton Herb.), and occasional in Litchfield County. May; fruit June.

Lonicera Xylosteum L. (bone-wood; referring to the hardness of the wood).

European Fly Honeysuckle.

Rare. Westport, escaped from cultivation to a roadside

(Eames). Mid-May — early June; fruit Aug.—Sept. Native of the Old World.

Lonicera orientalis Lam. (of the Orient).

Rare. Escaped from an old nursery to a pasture at Wethersfield (H. S. Clark & Bissell). June. Adventive from Asia.

Lonicera japonica Thunb.

Japanese Honeysuckle.

Roadsides and thickets. Occasional or local in most districts, becoming frequent near the coast. June — Oct. Naturalized from Asia.

Medicinal. Often cultivated for ornament.

Lonicera sempervirens L. (evergreen).

Trumpet Honeysuckle.

Occasional in woods and copses near the coast; also escaped from cultivation inland at South Windsor (A. W. Driggs), East Hartford (Weatherby), Salisbury (Mrs. C. S. Phelps). June; fruit Aug.

Cultivated for ornament. Medicinal.

Lonicera dioica L. (dioecious).

Lonicera glauca Hill.

Wild Honeysuckle.

Occasional. Woods and thickets. May — mid-June; fruit July.

SYMPHORICARPOS Ludwig. Snowberry.

Symphoricarpos orbiculatus Moench (circular).

Symphoricarpos vulgaris Michx.

Symphoricarpos Symphoricarpos MacM.

Indian Currant. Coral-berry.

Rare. Roadsides as an escape from cultivation: Waterford (Graves), Hartford (H. S. Clark & Bissell), Monroe and Seymour (Harger), Bridgeport and Darien (Eames), New Milford (C. K. Averill), Salisbury (Mrs. C. S. Phelps). July — Sept.; fruit Oct.—Dec. Introduced from the West or South.

Cultivated for ornament, as is the following species.

Symphoricarpos racemosus Michx. (racemed), var. **laevigatus** Fernald (smoothed).

Symphoricarpos racemosus of authors, not Michx.

Snowberry. Snowball.

Rare. Roadsides and about old house sites as an escape from cultivation: Ledyard and Montville (Graves), Southington (Andrews), Goshen (Bissell), Oxford (Harger), Milford, Fairfield and Ridgefield (Eames). June—Aug.; fruit Sept.—Oct. Introduced from the Northwest.

LINNAEA L. Twin-flower.

Linnaea borealis L. (northern), var. **americana** (Forbes) Rehder.

Linnaea borealis Gray's Manual ed. 6, not L.

Linnaea. Twin-flower.

Rare. Woods, either moist or dry: Ledyard and Franklin (Graves), Glastonbury (Mrs. F. W. Starmer), Granby (I. Holcomb), New Haven, formerly on East Rock (H. C. Beardslee), Milford (G. B. Grinnell, W. A. Setchell), Cornwall (E. E. Brewster). June.

TRIOSTEUM L. Horse Gentian. Feverwort.

Triosteum perfoliatum L. (with leaves meeting around the stem).

Feverwort. Tinker's Weed. Wild Coffee.

Frequent in dry fields and copses in the shore towns; not reported inland. Late May—June; fruit Sept.—Oct.

Medicinal, as is the following species.

Triosteum aurantiacum Bicknell (orange-colored).

Feverwort. Wild Coffee. Horse Gentian.

Dry woods, copses or pastures. Groton (Bissell), Franklin (Graves), and occasional or local westward and northward. May—June; fruit Aug.—Sept.

Triosteum angustifolium L. (narrow-leaved).

Rare. Rocky or sandy open woods: South Windsor and East Granby (H. S. Clark), Milford and Stratford, four widely separated stations (Eames). May; fruit Aug.

VIBURNUM L. Arrow-wood. Laurestinus.

Viburnum alnifolium Marsh. (alder-leaved).

Viburnum lantanoides Michx.

Hobble-bush. Witch Hobble. Moosewood.

Rich woods. Union (Graves, Bissell), Hamden (D. C. Eaton), Monroe (H. C. Beardslee), Redding (F. Mills), and occasional or frequent in the northwestern part of the state. May; fruit July.

Viburnum Opulus L. (classical name for some Maple), var. **americanum** (Mill.) Ait.

Viburnum Opulus Gray's Manual ed. 6, not L.

Viburnum americanum Mill.

High-bush Cranberry. Cranberry Tree. Cramp-bark. Pimbina.

Swamps and wet ground. Southington (Andrews), Waterbury (H. J. Bassett), Brookfield (C. K. Averill), and rare or local through the northwestern part of the state. May—June; fruit Aug.

The fruit is edible. The bark is of considerable value medicinally and is officinal. A cultivated form of the European *Viburnum Opulus* with transformed florets is the common Snowball of cultivation.

Viburnum acerifolium L. (maple-leaved).

Maple-leaved Viburnum. Dockmackie. Arrow-wood.

Common. Dry woods and thickets. June; fruit July—Aug.

Medicinal.

Viburnum pubescens (Ait.) Pursh (downy).

Downy Arrow-wood.

Rare. Dry rocky woods; Guilford (G. H. Bartlett), New Haven (Eaton Herb.), Meriden (Bissell), Southington (Andrews), Cheshire (Harger), Hamden and Kent (Eames), Salisbury (C. K. Averill). May—June; fruit Aug.

Viburnum dentatum L. (toothed).

Arrow-wood. Mealy Tree.

Frequent. Swamps and on banks of streams. June; fruit Aug.

Viburnum cassinoides L. (like *Ilex Cassine*, the Yaupon).

Witherod. Wild Raisin.

Swamps and wet woods. Frequent except in the southwestern part of Fairfield County where it is not known. June; fruit Aug.—Sept.

Viburnum nudum L. (naked).

Wild Raisin.

Rare. Swampy woods: Milford and Derby (Eames). Late June—July.

Viburnum Lentago L. (tough; pliant).

Sweet Viburnum. Sheepberry. Nannyberry. Wild Raisin.

Occasional or frequent. Thickets and fence-rows in either dry or wet ground. Late May—June; fruit Sept.—Oct.

The var. *SPHAEROCARPUM* Gray (round-fruited) sometimes occurs with the species, but its distribution is not known.

The fruit is edible but is unpalatable to many persons. The bark of the root is medicinal and is officinal, with, and under the name of, *Viburnum prunifolium*.

Viburnum prunifolium L. (plum-leaved).

Black Haw. Sloe. Stag-bush.

Rocky woods and thickets. Fairfield (Eames), and occasional or frequent near the coast westward. May—early June; fruit Sept.

The var. *GLOBOSUM* Nash (spherical) occurs at Greenwich (Bissell).

The bark of the root is much valued for its medicinal properties and is officinal.

SAMBUCUS L. Elder.**Sambucus canadensis** L.

Common or Black-berried Elder.

Common. Moist thickets and fence-rows. Mid-June—July; fruit Aug.—Sept.

The berries are used for making wine. The fruit and bark are medicinal, as are the flowers which were formerly officinal.

Sambucus racemosa L. (racemed).

Sambucus pubens Michx.

Red-berried Elder.

Rocky woods and thickets. Norwich (Mrs. E. E. Rogers), North Stonington, Preston and East Haddam (Graves), New Haven and Trumbull (Eames), Wilton (Eames & G. P. Ells), and occasional or frequent northward. May; fruit June—July.

VALERIANACEAE. VALERIAN FAMILY.

VALERIANA L. Valerian.

Valeriana officinalis L. (of the shops).

Garden Valerian or Heliotrope.

Rare. Roadsides as an escape from cultivation: Waterford and Lebanon (Graves), Southington (Andrews), Norfolk (Miss M. C. Seymour), Fairfield (Eames), Westport (Eames & C. C. Godfrey), Darien (Miss A. E. Carpenter). June. Introduced from Europe.

The root is well known for its medicinal properties and is officinal.

VALERIANELLA Hill. Corn Salad. Lamb's Lettuce.

Valerianella Locusta (L.) Betteke (old name for this plant).

Valerianella olitoria Poll.

Corn Salad.

Rare. Escaped from cultivation to waste ground in Fairfield (Eames). Aug. Fugitive from Europe.

Abroad is prized as a fall and winter salad plant, but is little known in America.

Valerianella radiata (L.) Dufr. (having rays).

Rare. Waterford, many plants on the banks of the Niantic River (Miss E. Shelly). June—July.

DIPSACACEAE. TEASEL FAMILY.

DIPSACUS L. Teasel.

Dipsacus sylvestris Huds. (of the woods).

Wild Teasel. Gipsy Combs.

Rare. Roadsides, pastures and waste places: Middletown (W. H. Blanchard), Southington (Andrews), New Haven

(Eaton Herb.), Milford, Bridgeport and Newtown (Eames), Southbury (Harger), Goshen (Bissell), Salisbury (C. C. Godfrey). July—Sept. Naturalized from Europe.

The plant is medicinal.

KNAUTIA L.

Knaulia arvensis (L.) T. Coulter (of cultivated ground).

Scabiosa arvensis L.

Field Scabious.

Rare. Southington, a few plants in an old field (W. N. Clute). June—July. Fugitive from Europe.

CUCURBITACEAE. GOURD FAMILY.

MOMORDICA L. Balsam-apple.

Momordica Charantia L.

Balsam-apple. Art Pumpkin. La-kwa.

Rare. Waste ground in Hartford (H. S. Clark & Bissell). Aug.—Sept. Fugitive from the Tropics.

The fruit is sometimes used medicinally. Cultivated for its fruit by the Chinese.

CITRULLUS Neck.

Citrullus vulgaris Schrad.

Citrullus Citrullus Karst.

Watermelon. Citron.

Rare. Waste places and about dumping grounds. July—Sept. Fugitive from Africa.

CUCUMIS L.

Cucumis Melo L. (an apple-shaped melon).

Melon. Muskmelon. Cantaloupe.

Rare. Waste or cultivated ground. June—Aug. Fugitive from southern Asia.

Common in cultivation, having many varieties dependent on the nature of the fruit.

Cucumis sativus L. (sown; planted).

Cucumber.

Rare. Waste ground about gardens and on dumps. July—Aug. Fugitive from southern Asia.

CUCURBITA L. Gourd. Squash. Pumpkin.**Cucurbita maxima** Duchesne (greatest).

Hubbard Squash. Marrow Squash.

Rare. Cultivated and waste ground. July — Aug. Fugitive, probably from tropical America.

Cucurbita moschata Duchesne (musky).

China Squash. Canada or Winter Crookneck Squash.

Rare. Waste ground and about dumps. July — Aug. Fugitive, probably from tropical America.

Cucurbita Pepo L. (classical name).

Pumpkin.

Rare or occasional. Waste places and cultivated ground. July — Aug. Fugitive, probably from tropical America.

Was formerly cultivated by the Indians.

Cucurbita Pepo L., var. **condensa** Bailey (condensed).

Summer Crookneck Squash. Scallop Squash.

Rare. Waste and cultivated ground. June — Aug. Fugitive from tropical America.

SICYOS L. One-seeded Bur Cucumber.**Sicyos angulatus** L. (angular).

Star Cucumber.

Moist rich soil of river banks and waste places. Frequent to common along the coast and larger rivers; rare elsewhere. Aug.—Sept.

ECHINO CYSTIS Torr. & Gray. Wild Balsam-apple.**Echinocystis lobata** (Michx.) Torr. & Gray (lobed).*Micrampelis lobata* Greene.

Wild Cucumber.

Occasional or frequent. Moist rich soil along streams and in waste places. July — Sept.

Often planted for ornament.

CAMPANULACEAE. BLUEBELL FAMILY.**SPECULARIA** Fabricius. Venus's Looking-glass.**Specularia perfoliata** (L.) A. DC. (with leaves that meet around the stem).*Legousia perfoliata* Britton.

Venus's Looking-glass.

Frequent to common. Dry woods and fields. June — Aug.

Reduced forms occur having all the flowers cleistogamous.

CAMPANULA L. Bellflower.

Campanula rapunculoides L. (like *Campanula Rapunculus*, the Rampion).

Bellflower.

Occasional. Roadsides and waste places. June — Oct.

Naturalized from Europe.

The var. *UCRANICA* (Bess.) K. Koch occurs at Groton (Graves), Putnam and Southington (Bissell), Huntington (Eames).

Campanula rotundifolia L. (round-leaved).

Campanula intercedens Witasek.

Harebell. Bluebell.

Dry, often rocky soil or on ledges. Rare in the eastern, central and southern parts of the state, becoming frequent or common in northwestern Connecticut. June — Sept.

Campanula patula L. (open; spreading).

Rare. Plainfield, a few plants in a newly seeded field (J. L. Sheldon). June. Fugitive from Europe.

Campanula aparinoides Pursh (like *Galium Aparine*, the Bed-straw).

Marsh Bellflower.

Frequent. Bogs and wet meadows. Late June — July.

Campanula carpatica Jacq.

Rare. Southington, a few plants in newly seeded ground (Andrews & Bissell). May — June. Fugitive from Europe.

JASIONE L. Sheep's-bit.

Jasione montana L. (of mountains).

Sheep's-bit.

Rare. Plainfield, a few plants in a newly seeded field (J. L. Sheldon), East Lyme (Miss F. McCook). June. Fugitive from Europe.

LOBELIACEAE. LOBELIA FAMILY.

LOBELIA L.

Lobelia cardinalis L. (cardinal).

Cardinal-flower.

Frequent. Open or shaded wet places. July — Sept.

One of our most brilliant flowers, and often succeeds well in cultivation. The plant is sometimes used medicinally.

Lobelia siphilitica L. (syphilitic).

Great Blue Lobelia.

Moist grassland or borders of streams. Orange (Eames), Oxford (Harger), and occasional westward and northward, becoming frequent or common in Litchfield County. July — Sept.

The plant is sometimes used medicinally.

Lobelia spicata Lam. (spiked).

Frequent to common. Fields and meadows. June — Aug.

Lobelia Kalmii L.

Swamps and on wet ledges. Goshen (J. P. Brace, 1822), Litchfield and Norfolk (Bissell), New Milford (C. K. Averill & E. H. Austin), becoming frequent in the limestone district of northwestern Connecticut. July — Oct.

Lobelia inflata L. (inflated).

Indian Tobacco.

Common. Woods, fields, roadsides and cultivated ground. July — Oct.

The leaves, tops and seeds are medicinal, the leaves and tops officinal. Somewhat poisonous, resembling tobacco in its action.

Lobelia Dortmanna L.

Water Lobelia.

In ponds and lakes. Rare in most districts: Salisbury (Mrs. C. S. Phelps), Canaan (J. H. Barbour), Litchfield (L. M. Underwood), Middlebury (Harger), Ridgefield (Eames), Monroe (H. C. Beardslee), Mansfield (Weatherby), Thompson (R. W. Woodward & Weatherby), Killingly (Weatherby & Bissell), Salem (W. A. Setchell), Griswold (E. F. Burle-

son. Occasional near the coast in New London County.
July — Sept.

COMPOSITAE. COMPOSITE FAMILY.

VERNONIA Schreb. Ironweed.

Vernonia noveboracensis Willd.

Ironweed.

Occasional, frequent or common. Low pastures and open swamps. July — Sept.

The root is medicinal. Sometimes a troublesome weed in low pastures.

EUPATORIUM L. Thoroughwort.

Eupatorium purpureum L. (purple).

Joe-Pye Weed. Purple Boneset. Trumpet Weed. Queen of the Meadow. Gravel-root.

Rare, local or frequent. Moist woods and in swamps.
July — Sept.

The root is valued for its medicinal properties and the leaves are also used.

Eupatorium purpureum L., var. *maculatum* (L.) Darl. (spotted).

Eupatorium maculatum L.

Joe-Pye Weed. Trumpet Weed. Purple Boneset.

Common. Open swampy places. July — Sept.

Sometimes occurs with white flowers. Medicinal like the typical form of the species.

Eupatorium purpureum L., var. *amoenum* (Pursh) Gray (pleasant).

Eupatorium maculatum L., var. *amoenum* Britton.

Rare. In swamps: Preston (Graves), Huntington (Eames). July — Sept.

Eupatorium hyssopifolium L. (having leaves like Hyssop).

Rare. Dry ground, mostly in the shore towns: East Lyme (Miss A. M. Ryon & Graves), Old Saybrook, Westbrook and Orange (Harger), Bridgeport (Eames). Inland at Southington (Bissell). Aug.—Sept.

Eupatorium verbenaefolium Michx. (having leaves like *Verbena*, the Vervain).

Eupatorium teucrifolium Willd.

Rough Boneset.

Open woods and borders of swamps, usually in sandy soil. Rare at Monroe (Harger), and Southington (Bissell); occasional in the valley of the Connecticut River, becoming frequent near and along the coast. Aug.—Sept.

Medicinal like *Eupatorium perfoliatum*.

Eupatorium pubescens Muhl. (downy).

Eupatorium rotundifolium L., var. *ovatum* Torr.

Open woods and thickets, mostly in dry ground. Rare at Stratford (Eaton Herb., Eames), and East Haven (Bissell); occasional in New London County and in the valley of the Connecticut River. Aug.—Sept.

Eupatorium sessilifolium L. (sessile-leaved).

Upland Boneset.

Dry woods. Rare in most districts: Southington and Meriden (Andrews & Bissell), Beacon Falls, Ansonia and Seymour (Harger), Salisbury (Mrs. C. S. Phelps). Occasional in the vicinity of the coast. Aug.—Sept.

Eupatorium perfoliatum L. (with leaves meeting around the stem).

Boneset. Thoroughwort. Ague-weed. Wild Sage.

Common. Low or wet ground. Aug.—Sept.

The var. *TRUNCATUM* Gray (cut off) is rare: Old Saybrook (Harger), Woodbury (Eames & C. C. Godfrey).

A form with the leaves in whorls of three has been collected at Bolton (Dr. E. J. Thompson).

The leaves and tops are much used in domestic medicine and are official.

Eupatorium urticaefolium Reichard (having leaves like *Urtica*, the Nettle).

Eupatorium ageratoides L.f.

White Snakeroot.

Occasional, local or frequent. Rocky woods in rich soil. Aug.—Sept.

The root is medicinal.

Eupatorium aromaticum L. (aromatic).

White Snakeroot.

Rare. Dry woods: Lisbon (Graves), Norwich (Mrs. E. E. Rogers), New Haven (Eaton Herb.). Aug.

The root is used medicinally like that of *Eupatorium urticaefolium*.

MIKANIA Willd. Climbing Hemp-weed.**Mikania scandens** (L.) Willd. (climbing).

Willoughbya scandens Kuntze.

Climbing Boneset or Hemp-weed.

Swamps and along streams. Occasional or local in most parts of the state; frequent in southwestern Connecticut. Aug.—Sept.

LIATRIS Schreb. Button Snakeroot. Blazing Star.**Liatris scariosa** Willd. (thin and dry).

Lacinaria scariosa Hill.

Devil's Bit. Blazing Star.

Dry, mostly sandy soil of fields, thickets and sand dunes. Frequent in the shore towns; occasional or local northward, especially in the central part of the state. Aug.—Oct.

The root is medicinal.

GRINDELIA Willd. Gum-plant. Tar-weed.**Grindelia squarrosa** (Pursh) Dunal (with spreading scales).

Gum-plant.

Rare. Waste ground: Naugatuck (B. B. Bristol). July — Sept. Fugitive from the West.

The plant is used as a medicine by the Indians. The leaves and fruiting tops are officinal.

CHRYSOPSIS Nutt. Golden Aster.**Chrysopsis falcata** (Pursh) Ell. (sickle-shaped).

Golden Aster.

In sand, especially on sea beaches. Rare inland: Colchester (Dr. E. J. Thompson). Plentiful on the coast from Milford (Harger, Eames) westward to Westport, especially on beaches in Stratford and Bridgeport (Eames). July — Oct.

SOLIDAGO L. Golden-rod.**Solidago squarrosa** Muhl. (with spreading scales).

Rare or local. Dry rocky woods in either trap or limestone soils: Meriden (Eaton Herb.), Berlin and New Britain (Bissell), Southington (Andrews), Farmington and Cheshire (Harger), Salisbury (Bissell). Aug.—Sept.

Solidago caesia L. (bluish-gray).

Frequent. Woods and thickets, usually in rich soil. Late Aug.—Oct.

The var. *AXILLARIS* (Pursh) Gray (axillary) is occasional with the species. The var. *PANICULATA* Gray (panicked) occurs at Willington (Bissell) and New Haven (D. C. Eaton). A hybrid with *Solidago latifolia* has been collected at Lantern Hill, North Stonington (Graves).

Solidago latifolia L. (broad-leaved).

Solidago flexicaulis L. in part.

Occasional or local. Rich, often rocky, woods. Aug.—Oct.

Solidago bicolor L. (two-colored).

White Golden-rod.

Common. Dry fields and open woods. Aug.—Oct.

Solidago hispida Muhl. (rough-hairy).

Solidago bicolor L., var. *concolor* Torr. & Gray.

Rare. Dry rocky woods or fields: Franklin (R. W. Woodward), Waterford (Graves), Meriden (Andrews), Simsbury (I. Holcomb), Waterbury (A. E. Blewitt), Oxford (Harger), Farmington and Winchester (Bissell). Aug.—Sept.

Solidago puberula Nutt. (slightly downy).

Rare or local. Rocky or sandy woods and fields, sometimes in moist ground: North Stonington, Voluntown, Waterford and Stafford (Graves), Union (Graves, Bissell), Hampton and East Hartford (Weatherby), Glastonbury (Mrs. F. W. Starmer), Guilford (G. H. Bartlett), Southington (Andrews & Bissell), Oxford (Harger), Milford (Eames), Salisbury (Bissell). Aug.—Sept.

A handsome species.

Solidago uliginosa Nutt. (growing in marshes).

Rare. Salisbury, in swamps (Bissell). Aug.—Sept.

Solidago speciosa Nutt. (showy).

Dry fields, pastures and open woods. Putnam (Weatherby & Bissell), Willington (Graves & Bissell), Hampton and South Windsor (Weatherby), Salisbury (Mrs. C. S. Phelps, Bissell); becoming occasional southward and frequent near the coast. Sept.—Oct.

Of striking habit and a beautiful plant when in flower.

Solidago sempervirens L. (evergreen).

Common on and about salt marshes and along tidal streams. Aug.—Oct.

Solidago patula Muhl. (open; spreading).

Wet places, either open or shaded. Rare in New London County. Occasional or frequent elsewhere. Aug.—Sept.

Solidago arguta Ait. (sharp).

Rocky woods or in half-shade. Rare in New London County: Franklin (R. W. Woodward). Occasional or frequent elsewhere. Aug.—Sept.

Solidago juncea Ait. (like *Juncus*, the Rush).

Common. Dry fields and roadsides. July — Aug.

This is the earliest to bloom of our common Golden-rods.

A form approaching var. *ramosa* Porter & Britton has been found at Wolcott (H. S. Clark & Bissell), and Derby (Eames).

Solidago neglecta Torr. & Gray (neglected).

Frequent. Swamps and open bogs. Aug.—Sept.

Solidago uniligulata (DC.) Porter (having one ray flower).

Solidago neglecta Torr. & Gray, var. *linoides* Gray.

Rare. In swamps: Groton (Graves), Thompson (Weatherby & Bissell), Franklin (R. W. Woodward), Salisbury (Bissell). Aug.

Solidago odora Ait. (fragrant).

Sweet Golden-rod.

Dry woods and copses, usually in sandy soil. Occasional

in the central part of the state and in the valley of the Housatonic River; frequent near the coast. July—Aug.

The leaves and tops are used medicinally.

Solidago Elliottii Torr. & Gray.

Rare. Usually in swampy ground but sometimes in drier places: Voluntown, Groton and Waterford (Graves), Windsor (H. S. Clark, Weatherby & Bissell), Southington (Andrews & Bissell), Glastonbury and Goshen (Bissell). Sept.

Solidago ulmifolia Muhl. (having leaves like *Ulmus*, the Elm).

Occasional. Dry woods and copses. Aug.—Sept.

Solidago rugosa Mill. (wrinkled).

Solidago altissima of authors, not L.

Golden-rod. Wallweed.

Common. Fields, thickets and roadsides in various soils. Aug.—Oct.

The var. *SPHAGNOPHILA* Graves (loving peat-moss) occurs in sphagnum swamps in Voluntown and Waterford (Graves).

× **Solidago asperula** Desf. (roughish).

Rocky ground. Occasional on the coast from the mouth of the Connecticut River eastward (Graves). Aug.—Sept.

This is believed to be a hybrid between *Solidago rugosa* and *Solidago sempervirens*.

Solidago aspera Ait. (rough).

Solidago rugosa of Gray's Manual ed. 6 in part.

Occasional. Woods, fields and roadsides, usually in dry ground. Aug.—Sept.

Solidago nemoralis Ait. (of groves).

Common. Dry fields and open places. Aug.—Sept.

Solidago canadensis L.

Solidago canadensis L., var. *glabrata* Porter.

Rare. Alluvial soil at Selden's Cove, Lyme (Graves). Late July—Aug.

Solidago altissima L. (tallest).

Solidago canadensis of Gray's Manual ed. 6 in part.

Solidago canadensis L., var. *scabra* Torr. & Gray.

Solidago canadensis L., var. *scabriuscula* Porter.

Golden-rod.

Common. Fields, roadsides and fence-rows. Aug.—Sept.
A handsome and well-marked species.

***Solidago serotina* Ait. (late).**

Rare, occasional or local. Moist places, often in alluvial soil. July — Aug.

***Solidago serotina* Ait., var. *gigantea* (Ait.) Gray (gigantic).**

Occasional or frequent. Low fields and thickets and borders of swamps. Aug.—Sept.

***Solidago rigida* L. (stiff).**

Rare or local. Dry fields and open woods: Stonington and Mansfield (Graves), Andover (Mrs. C. S. Phelps), East Lyme (Miss A. M. Ryon, Graves), Guilford (G. H. Bartlett), Branford (O. Harger), East Haven and Brookfield (Harger), Milford (Bissell), Stratford (Eames), Monroe (H. C. Beardslee), Norwalk (E. H. Baldwin). Aug.—Oct.

***Solidago graminifolia* (L.) Salisb. (grass-leaved), var. *Nuttallii* (Greene) Fernald.**

Solidago lanceolata Gray's Manual ed. 6 in part.

Euthamia graminifolia Britton's Manual in part.

Frequent or common. Moist ground, usually in rich soil, and in swamps. Aug.—Sept.

***Solidago tenuifolia* Pursh (narrow-leaved).**

Euthamia caroliniana of American authors in part, not Greene.

Euthamia tenuifolia Greene.

Dry or moist fields. Common in southwestern Connecticut; occasional or local elsewhere. Aug.—Oct.

Sometimes troublesome to farmers as a weed in pastures.

BOLTONIA L'Hér.***Boltonia asteroides* (L.) L'Hér. (aster-like).**

Boltonia.

Rare. Roadsides, waste ground and rocky woods: Thompson (Weatherby & Bissell), Hartford (A. W. Driggs), Meriden (R. W. Woodward & Andrews). Sept. Introduced from the West.

A good plant for hardy borders and often cultivated for ornament.

ASTER L. Starwort. Aster. Frost-flower.**Aster divaricatus L.** (widely divergent).*Aster corymbosus* Ait.*Aster carmesinus* Burgess.*Aster tenebrosus* Burgess.*Aster divaricatus* and varieties Burgess.*Aster Claytoni* Burgess.*Aster Claytoni* Burgess, var. *crispicans* Burgess.

Common. Woods and thickets, in either moist or dry ground. Aug.—Sept.

A very variable species with many described forms.

Aster Schreberi Nees.*Aster curvescens* Burgess.*Aster curvescens* Burgess, var. *umbelliformis* Burgess.*Aster curvescens* Burgess, var. *oviformis* Burgess.

Rare, local or frequent. Woods and thickets, usually in rich soil. July—Aug.

Aster macrophyllus L. (large-leaved).*Aster roscidus* Burgess.*Aster macrophyllus* and varieties Burgess.

Rare or occasional. Rich woods, more often in rocky places. Mid-July—Sept.

The var. *PINGUIFOLIUS* Burgess (greasy-leaved) occurs at Colchester (Graves), Meriden and Southington (Andrews & Bissell), Bristol and Norwalk (Bissell), Trumbull and Fairfield (Eames), Bridgeport and New Milford (C. K. Averill).The var. *IANTHINUS* (Burgess) Fernald (violet-colored), *Aster ianthinus* Burgess, *Aster violaris* Burgess, *Aster multiformis* Burgess, *Aster nobilis* Burgess, is rare: Groton (Graves), Union (Bissell), Meriden (Andrews), Milford (H. S. Clark), Fairfield County (Eames).**Aster Herveyi** Gray.

Rare. Dry woods: Groton (Graves), Stratford (Eames). Aug.—Sept.

Aster spectabilis Ait. (showy).

Rare. Dry rocky or sandy soil: Voluntown, Groton and Waterford (Graves). Sept.

Aster radula Ait. (a scraper; referring to the rough leaves).

Rare. Low ground: Voluntown (Graves), East Hartford (Weatherby), Hamden (Eaton Herb.). Sept.

Aster novae-angliae L.

New England Aster.

Frequent. Fields and roadsides, usually in moist rich soil. Aug.—Oct.

The var. *ROSEUS* (Desf.) DC. (rosy; pink) is sometimes seen.

One of the most beautiful of our Asters.

Aster patens Ait. (spreading).

Frequent. Dry fields and open woods, in sandy or sterile soil. Aug.—Sept.

Aster undulatus L. (wavy).

Aster undulatus and varieties Burgess.

Common. Woods, thickets and fields in dry soil. Aug.—Oct.

A very variable species.

Aster cordifolius L. (having heart-shaped leaves).

Aster cordifolius and varieties Burgess.

Common. Woods, thickets and roadsides. Sept.—Oct.

The var. *POLYCEPHALUS* Porter (many-headed) is occasional, as well as a variety of forms intermediate between it and the species. A hybrid with *Aster ericoides* occurs at Salisbury (Mrs. C. S. Phelps & Bissell).

Aster Lowriganus Porter.

Rare. Dry open woods: New Haven (R. W. Woodward). Sept.

The var. *LANCEOLATUS* Porter (lance-shaped), var. *lanceifolius* Porter, *Aster cordifolius* L., var. *lanceolatus* Porter, is rare or local in rich woods.

A great variety of intermediates between the variety and the typical form have been noted.

Aster laevis L. (smooth).

Frequent or common. Moist or dry fields, thickets and borders of woods. Late July — Sept.

The var. *AMPLIFOLIUS* Porter (large-leaved) occurs at Hampton (A. W. Driggs).

Very variable as to form of leaf. A handsome species.

Aster concinnus Willd. (neat; elegant).

Rare. Southington, rock crevices of dry shaded ledges at Meriden Mt. (Andrews). Sept.

One of the rarest plants of North America. Three, or doubtfully four, other stations only are known. See *Rhodora* 2:166.

Aster ericoides L. (like *Erica*, the Heath).

Common. Dry mostly open places. Sept.—Oct.

The var. *VILLOSUS* Torr. & Gray (hairy), var. *pilosus* Porter, is occasional in New London County (Graves), and occurs as far west as New Haven (J. A. Allen). A hybrid with *Aster undulatus* occurs at Oxford (Harger).

Aster amethystinus Nutt. (of the color of amethyst).

Rare. Dry to moist open ground: New London and Sprague (Graves), Oxford and Southbury (Harger), Salisbury (Mrs. C. S. Phelps). Sept.

Aster multiflorus Ait. (many-flowered).

Common. Dry fields and roadsides. Sept.—Oct.

The var. *EXIGUUS* Fernald (small; mean) sometimes occurs with the typical form.

Aster dumosus L. (bushy).

Dry soil of open fields or in half shade. Southington (Andrews & Bissell), Farmington (Bissell), Manchester (Weatherby), Stafford (Graves), Old Saybrook (Bissell); becoming frequent in eastern Connecticut. July—Sept. The so-called *Aster Gravesii* Burgess is apparently a hybrid of *Aster dumosus* with some other species, probably *Aster laevis*, and occurs at Waterford (Graves).

Aster dumosus L., var. *coridifolius* (Michx.) Torr. & Gray (having leaves like *Coris*, a genus of the Primrose Family).

Rare. Sandy thickets or more open ground: Ellington (Weatherby), Southington (Bissell). Aug.—Sept.

Aster dumosus L., var. *strictior* Torr. & Gray (more upright).

Rare. Dry fields: Stafford and Groton (Graves). Aug.—Sept.

Aster vimineus Lam. (bearing long flexible twigs).

Common. Moist fields and roadsides. Aug.—Oct.

The var. *FOLIOLOSUS* Gray (leafy) is occasional, growing with the typical form.

Aster lateriflorus (L.) Britton (having one-sided flower-clusters).

Aster diffusus Ait.

Aster lateriflorus Britton, var. *pendulus* Burgess.

Common. Fields and woods in either moist or dry ground. Aug.—Oct.

Aster lateriflorus (L.) Britton, var. *hirsuticaulis* (Lindl.) Porter (hairy-stemmed).

Aster hirsuticaulis Lindl.

Aster diffusus Ait., var. *hirsuticaulis* Gray.

Occasional. Moist shaded ground. Sept.—Oct.

Aster lateriflorus (L.) Britton, var. *thyrsoides* (Gray) Sheldon (wand-like).

Aster diffusus Ait., var. *thyrsoides* Gray.

Rare. Fields: Fairfield and Westport (Eames). Sept.—Oct.

Aster Tradescanti L.

Rare. In swamps: East Hartford (A. W. Driggs), Stratford (Eames), Salisbury (Bissell). Aug.—Sept.

Aster paniculatus Lam. (panicled).

Frequent or common. Moist roadsides and thickets, and in alluvial soil along streams. Aug.—Sept.

The var. *SIMPLEX* (Willd.) Burgess (simple) and the var. *ACUTIDENS* Burgess (having sharp teeth) occur rarely in moist ground.

Aster longifolius Lam. (long-leaved).

Rare. In swamps: Farmington and Litchfield (Bissell). Sept.

Aster novi-belgii L.

Moist or wet ground or in swamps. Common along the

coast; frequent in the Connecticut Valley; occasional, local or rare elsewhere. Sept.—Oct.

Aster tardiflorus L. (late-flowering).

Rare. Borders of swamps and in low thickets: Stafford, Plymouth and Salisbury (Bissell). Sept.

Aster prenanthoides Muhl. (like *Prenanthes*, the Rattlesnake-root).

Rare. Wet thickets: Trumbull (Eames). A specimen in the Bassett Herbarium at Waterbury, labelled "Ct.," is apparently of this species. Sept.

Aster puniceus L. (crimson).

Red-stalked Aster.

Frequent to common. Open or wooded wet places. Aug.—Sept.

The var. *compactus* Fernald (close); the var. *firmus* (Nees) Torr. & Gray (strong), var. *laevicaulis* Gray; the var. *demissus* Lindl. (low); and the var. *lucidulus* Gray (somewhat shining) are all reported to occur rarely or occasionally with the species.

The root is medicinal.

Aster umbellatus Mill. (umbellate).

Doellingeria umbellata Nees.

Frequent. Moist woods and thickets. July — Sept.

Aster infirmus Michx. (not strong).

Doellingeria infirma Greene.

Rare. Dry woods and thickets: West Hartford (Harger), Southington (Andrews & Bissell), Meriden and Wolcott (Andrews), New Milford and Kent (C. K. Averill), New Fairfield (Eames & C. C. Godfrey). July — Aug.

Aster linariifolius L. (having leaves like *Linaria*, the Toad-flax).

Ionactis linariifolius Greene.

Frequent or local. Dry open sandy or sterile soil. Aug.—Oct.

Aster tataricus L. f.

Siberian Aster.

Rare. Killingly, escaped from cultivation to waste ground (Graves). Oct. Introduced from Asia.

Aster acuminatus Michx. (taper-pointed).

Occasional or frequent. Rich woods. Aug.—Sept.

Aster tenuifolius L. (slender-leaved).

Frequent in salt marshes and about tidal waters. Aug.—Oct.

Aster subulatus Michx. (awl-shaped).

Common in salt marshes. Sept.—Oct.

ERIGERON L. Fleabane.

Erigeron pulchellus Michx. (pretty).

Erigeron bellidifolius Muhl.

Robin's Plantain.

Common. Fields, meadows and open woods, usually in moist soil. May—June.

Erigeron philadelphicus L.

Daisy Fleabane. Skevish.

Fields, meadows and roadsides. Norwich (J. Trumbull), Guilford (G. H. Bartlett), Southington (Andrews), and frequent in towns along the Connecticut and Housatonic Rivers. June—July.

The herb is medicinal.

Erigeron annuus (L.) Pers. (annual).

Daisy Fleabane. Sweet Scabious.

Common. Fields and waste places. June—Sept.

The herb has medicinal properties.

Erigeron ramosus (Walt.) BSP. (branching).

Erigeron strigosus Muhl.

Daisy Fleabane.

Common. Fields and waste places. June—Sept.

The var. *DISCOIDEUS* (Robbins) BSP. (having disk flowers only) is occasional with the species.

Erigeron canadensis L.

Leptilon canadense Britton.

Horse-weed. Canada Fleabane. Butter-weed.

Common. Cultivated and waste ground. July — Oct.

The herb is used medicinally and the oil distilled from it is official. Often a troublesome weed.

SERICOCARPUS Nees. White-topped Aster.

Sericocarpus asteroides (L.) BSP. (aster-like).

Sericocarpus conyzoides Nees.

Common. Dry woods and fields. July — Aug.

Sericocarpus linifolius (L.) BSP. (having leaves like *Linum*, the Flax).

Sericocarpus solidagineus Nees.

Rare or local. Dry fields, woods and on rocky summits: Groton and Waterford (Graves), East Hartford (A. W. Driggs & Weatherby), East Windsor (Bissell), Southington and Plainville (Andrews, Bissell), Hamden, Waterbury and Oxford (Harger), Beacon Falls and Huntington (Eames). July — Aug.

BACCHARIS L. Groundsel Tree.

Baccharis halimifolia L. (having leaves like *Atriplex Halimus*). Groundsel Tree. Pencil Tree.

Rare. Borders of salt marshes: Stonington and Groton (Graves), New London (Miss M. Crofton), East Lyme (Miss A. M. Ryon, Gen. Haskins), East Haven (Harger), Bridgeport (C. K. Averill, Eames), Norwalk (Miss A. E. Carpenter, Bissell). Sept.; fruit Oct.

PLUCHEA Cass. Marsh Fleabane.

Pluchea camphorata (L.) DC. (having the odor of camphor). Salt Marsh Fleabane.

Frequent on salt marshes along the coast. Aug.—Oct. Rarely occurs with white flowers.

ANTENNARIA Gaertn. Everlasting. Ladies' Tobacco. Pussy's Toes.

Antennaria Parlinii Fernald.

Antennaria arnoglossa Greene.

Rare. Dry woods and banks: Guilford (G. H. Bartlett), East Hartford (Weatherby), New Haven (M. L. Fernald),

Woodstock, Wallingford and Monroe (Harger), Winchester (Bissell). May.

***Antennaria canadensis* Greene.**

Rare or local. Dry woods and fields: Stafford (Graves), Lisbon and Southbury (Harger), Bolton, East Hartford and Salisbury (Weatherby), West Hartford (A. W. Driggs), Southington (Andrews & Bissell), North Canaan (Bissell). May.

***Antennaria plantaginifolia* (L.) Richards. (plantain-leaved).**

Antennaria plantaginea R. Br.

Plantain-leaved Everlasting.

Frequent to common. Dry woods and fields. Late April — May.

***Antennaria fallax* Greene (deceitful).**

Antennaria ambigens Fernald.

Dry woods and fields. Frequent in the southwestern part of the state, becoming local or occasional eastward and northward. May.

***Antennaria neodioica* Greene.**

Frequent. Dry fields and open woods. April — May.

***Antennaria neglecta* Greene (neglected).**

Indian Tobacco.

Common. Dry or sterile places, mostly in open fields. April — May.

The earliest flowering and most plentiful species of the genus.

ANAPHALIS DC. Everlasting.

***Anaphalis margaritacea* (L.) Benth. & Hook. (pearly).**

Pearly Everlasting.

Frequent to common. Fields and pastures, usually in dry soil. July — Sept.

The leaves are medicinal and reputed to be a cure for rattlesnake bite.

GNAPHALIUM L. Cudweed.

***Gnaphalium polycephalum* Michx. (many-headed)**

Gnaphalium obtusifolium of Britton's Manual.

Common or Sweet Everlasting.

Common. Dry ground in various soils. Aug.—Sept.

Gnaphalium decurrens Ives (decurrent).

Everlasting.

Rare or local. Dry fields and woods: Southington (Bissell), New Haven (E. Ives), Oxford, Seymour and Middlebury (Harger), Litchfield (Eaton Herb.), Huntington, New Milford and Kent (Eames), Salisbury (Mrs. C. S. Phelps). Aug.—Sept.

Gnaphalium uliginosum L. (growing in marshes).

Cudweed. Low Cudweed.

Common. Fields and roadsides in moist ground. June — Sept.

Gnaphalium purpureum L. (purple).

Purplish Cudweed.

Rare or local. Dry fields and pastures: Stonington, Groton and Waterford (Graves). June — Aug.

INULA L. Elecampane.

Inula Helenium L. (classical name).

Elecampane.

Occasional to frequent. Fields, pastures and roadsides, mostly in moist rich soil. July — Sept. Naturalized from Europe.

The root is medicinal and was formerly officinal.

POLYMNIA L. Leafcup.

Polymnia canadensis L.

Leafcup.

Rare or local. Rocky open woods on slopes of loose trap rock: North Branford (G. H. Bartlett), Durham, north end of Pistapaug Pond (O. D. Allen), also in Wallingford, in a similar situation $\frac{1}{4}$ mile from the Durham locality (Harger). Sept.

SILPHIUM L. Rosin-weed.

Silphium perfoliatum L. (having leaves that meet around the stem).

Cup Plant.

Rare. Waste ground: Southington (Weatherby & Bissell), Fairfield (Eames). Aug. Introduced from the West. The rhizome is medicinal.

IVA L. Marsh Elder. Highwater-shrub.

Iva oraria Bartlett (of the coast).

Iva frutescens of Gray's Manual ed. 6, not L.

Highwater-shrub.

Common on salt marshes and seashores. July — Sept.

Iva xanthifolia Nutt. (having leaves like *Xanthium*, the Clotbur).

Rare. Waste places: Naugatuck (A. E. Blewitt), Bridgeport (Eames), New Milford (E. H. Austin). July — Sept. Introduced from the West.

AMBROSIA L. Ragweed.

Ambrosia bidentata Michx. (two-toothed).

Rare. Bridgeport, in waste ground (Eames). Sept. Fugitive from the West.

Ambrosia trifida L. (three-cleft).

Great Ragweed.

Moist places and alluvial flats. Usually rare; but local, frequent or common along the larger rivers and in southwestern Connecticut. Aug.—Sept.

The var. *INTEGRIFOLIA* (Muhl.) Torr. & Gray (having entire leaves) is occasional with the typical form.

A coarse and unsightly weed.

Ambrosia artemisiifolia L. (having leaves like *Artemisia*, the Wormwood).

Ragweed. Hog-weed. Bitter-weed. Roman Wormwood.

Common. Open places, especially in waste and cultivated ground. July — Sept.

A troublesome and pernicious weed in all soils. Its pollen is said to cause hay fever. The plant is medicinal.

XANTHIUM L. Clotbur. Cocklebur.

Xanthium spinosum L. (spiny).

Prickly or Spiny Clotbur.

Rare. Waste ground: Bridgeport (Eames), Naugatuck (A. E. Blewitt). Aug.—Sept.; fruit Sept.—Nov. Adventive from tropical America.

The leaves are medicinal.

Xanthium canadense Mill.

Xanthium glabratum Britton.

Xanthium pungens Wallr. (?).

Xanthium strumarium of Britton & Brown's Ill. Flora.

Rare or local. Sandy roadsides and beaches, banks of streams and in waste places: Stratford and Fairfield (Eames), Oxford (Harger), West Hartford, Goshen, Norwalk and Sharon (Bissell). Aug.—Sept.

Xanthium commune Britton (growing in colonies).

Rare. Banks of streams and in waste places: East Windsor (Bissell), Stratford, Bridgeport, Fairfield and New Milford (Eames), Stamford (A. W. Driggs). Aug.—Sept.

Xanthium echinatum Murr. (hedgehog-like).

Xanthium canadense Mill., var. *echinatum* Gray.

Frequent or common. Waste places, banks of streams and about ponds. Aug.—Sept.

HELIOPSIS Pers. Ox-eye.

Heliopsis helianthoides (L.) Sweet (like Helianthus, the Sunflower).

Heliopsis laevis Pers.

Rare. Waste ground and sandy woods: Southington (Andrews & Bissell), Seymour (Harger), Naugatuck (A. E. Blewitt), Fairfield (Eames). July — Sept. Introduced from the West.

Heliopsis scabra Dunal (rough).

Rare. Dry fields and roadsides: East Lyme (Miss A. M. Ryon & Graves), Montville (Graves), Berlin (Andrews & Bissell), Cheshire (A. E. Blewitt), Oxford (Harger), Seymour and Huntington (Eames). July — Sept.

RUDBECKIA L. Cone-flower.

Rudbeckia triloba L. (three-lobed).

Rare. Roadsides and banks of streams: Hartford (H. S.

Clark & Bissell), Meriden (Andrews), Waterbury (A. E. Blewitt), Woodbury (Eames & C. C. Godfrey), New Milford (C. K. Averill, Eames), Salisbury (Mrs. C. S. Phelps). Aug.—Sept. Introduced from the West.

Rudbeckia subtomentosa Pursh (somewhat woolly).

Rare. Roadside in Windsor (Bissell). Aug.—Sept. Adventive from the West.

Rudbeckia hirta L. (rough).

Yellow Daisy. Black-eyed Susan. Nigger-head.

Common. Fields and meadows, more often in dry ground. June—Aug. Introduced from the West.

Rudbeckia speciosa Wenderoth (showy).

Cone-flower.

Local. Waterford (Miss A. Smith), Brookfield, fairly plentiful in a field and along a roadside (Harger). Aug.—Sept. Adventive from the south-central United States.

Rudbeckia laciniata L. (slashed).

Tall Cone-flower. Thimble-weed.

Occasional to frequent. Moist thickets and along streams. July—Sept.

A double-flowered form of this is often cultivated for ornament under the name of Golden Glow, and sometimes escapes to roadsides and waste ground. The plant is medicinal.

BRAUNERIA Neck. Purple Cone-flower.

Brauneria pallida (Nutt.) Britton (pale).

Echinacea angustifolia of authors, not DC.

Purple Cone-flower.

Rare. Dry ground: Griswold (E. F. Burleson), East Lyme (Mrs. F. H. Dart), Vernon (A. W. Driggs), Southington (Andrews). July. Adventive from the West.

LEPACHYS Raf.

Lepachys pinnata (Vent.) Torr. & Gray (pinnate).

Ratibida pinnata Barnhart.

Cone-flower.

Rare. Oxford, in dry fields (Harger). Aug. Fugitive from the West.

HELIANTHUS L. Sunflower.**Helianthus annuus L.** (annual).

Common Sunflower.

Occasional. Waste places as an escape from cultivation.
July — Sept. Adventive from the western United States.

Cultivated for ornament and for its seeds which yield an oil or are fed to poultry. The plant is medicinal.

Helianthus petiolaris Nutt. (provided with leaf-stalks).

Rare. Roadsides and waste ground as an escape from cultivation: East Lyme (Miss A. M. Ryon), Hartford (H. S. Clark), Naugatuck (B. B. Bristol), New Milford (E. H. Austin). Aug. — Sept. Introduced from the western United States.

Helianthus debilis Nutt. (weak).

Rare. Waste ground: Waterbury (A. E. Blewitt).
Sept. — Oct. Fugitive from the South.

Helianthus debilis Nutt., var. cucumerifolius (Torr. & Gray)
Gray (cucumber-leaved).

Rare. New London, escaped from gardens (Graves), Bridgeport (Eames). July — Aug. Fugitive from the Southwest.

Helianthus scaberrimus Ell. (very rough).

Helianthus rigidus Desf.

Rare. Dry fields: Waterbury (A. E. Blewitt), Oxford (Harger). Aug. — Sept. Adventive from the West.

Helianthus laetiflorus Pers. (flowering abundantly).

Rare. Glastonbury, along roadside and in waste ground (Bissell). Aug. — Sept. Adventive from the West.

Helianthus grosseserratus Martens (coarsely toothed).

Rare. Fields and open places: Newington, apparently native at this station (Weatherby), Oxford, probably introduced (Harger). Aug. — Sept.

Helianthus giganteus L. (gigantic).

Helianthus giganteus L., var. *ambiguus* Torr. & Gray.

Moist ground and banks of streams. Occasional or frequent near the coast eastward, becoming common in the south-

western part of the state; extending inland as far as Waterbury (H. J. Bassett) and Kent (Eames). Aug.—Sept.

Helianthus Maximiliani Schrad.

Rare. Waste ground: Naugatuck (A. E. Blewitt), New Milford (E. H. Austin), Bridgeport (Eames). Mid-July — Aug. Fugitive from the western United States.

Helianthus divaricatus L. (widely diverging).

Common. Dry fields, thickets and open woods. July — Sept.

Helianthus strumosus L. (bearing wens or swellings).

Frequent. Thickets and borders of woods. Aug.—Sept.

The var. *MOLLIS* Torr. & Gray (soft), var. *macrophyllus* Britton, is rare: Groton (Graves), Norwich (Mrs. E. E. Rogers), Willington (Graves & Bissell).

Helianthus trachelifolius Mill. (having leaves like *Trachelium*, the Throatwort).

Rare. There is a specimen of this in the Gray Herbarium collected at New Haven by Charles Wright. Not otherwise known from the state. Aug.—Sept.

Helianthus decapetalus L. (having ten petals).

Wild Sunflower.

Frequent. Moist or dry woods, thickets and fence-rows. Aug.—Sept.

Helianthus tuberosus L. (bearing tubers.)

Jerusalem Artichoke.

Occasional. Waste places and roadsides. Aug.—Oct. Naturalized from the West.

The tubers are edible and are used for pickles and salads; they also furnish a valuable food for stock. The plant was formerly cultivated by the Indians.

COREOPSIS L. Tickseed.

Coreopsis tinctoria Nutt. (used for dyeing).

Rare. Waste places: New London (Graves), Southington (Andrews), Bridgeport, Stratford and Norwalk (Eames). June — Sept. Adventive from the West.

Coreopsis lanceolata L. (lance-shaped).

Rare. Roadsides: Southington (Andrews & Bissell), Oxford (Harger). July. Adventive from the Southwest.

BIDENS L. Bur Marigold.**Bidens discoidea** (Torr. & Gray) Britton (having only disk flowers).

Coreopsis discoidea Torr. & Gray.

Swamps and about ponds. Occasional near the coast and throughout the valley of the Connecticut River. Aug.—Sept.

Bidens frondosa L. (leafy).

Bidens melanocarpa Wiegand.

Common Beggar-ticks. Stick-tight.

Common. Moist fields, swamps, waste places and cultivated ground. Aug.—Sept.

Bidens vulgata Greene (common).

Bidens frondosa Wiegand, not L.

Beggar-ticks. Stick-tight.

Frequent. Fields, roadsides and cultivated ground, in moist soil. Aug.—Sept.

Bidens comosa (Gray) Wiegand (bearing a tuft of hairs).

Bidens connata Muhl., var. *comosa* Gray.

Frequent. Moist soil in various situations. Aug.—Oct.

Bidens connata Muhl., var. *petiolata* (Nutt.) Farwell (having leaf-stalks).

Bidens connata of authors in part.

Swamp Beggar-ticks.

Frequent. Swamps and wet woods. Aug.—Sept.

A form with ray flowers occurs occasionally.

Bidens cernua L. (nodding).

Bidens cernua L., var. *elliptica* Wiegand.

Stick-tight.

Common. Wet meadows, along ditches and on shores. Sept.—Oct.

Bidens laevis (L.) BSP. (smooth).

Bidens chrysanthemoides Michx.

Bur Marigold.

Marshes and borders of ponds and streams. Frequent near the coast in southwestern Connecticut and inland as far as Ridgefield (Eames & C. C. Godfrey); occurs also along the Connecticut River throughout its course; not reported elsewhere. Aug.—Oct.

Bidens bipinnata L. (twice-pinnate).

Spanish Needles.

Rocky woods, roadsides and waste places in sandy soil. New London (Graves), Oxford (Harger), and occasional in the southwestern part of the state. Aug.—Oct.

The plant is medicinal.

Bidens leucantha Willd. (white-flowered).

Rare. Hartford, in waste ground (H. S. Clark). Sept. Fugitive from the South.

Bidens trichosperma (Michx.) Britton (with hairy seeds).

Coreopsis trichosperma Michx.

Tickseed Sunflower.

Rare. New Haven, Goffe St. (O. Harger). Aug.—Oct.

Bidens aristosa (Michx.) Britton (bearing bristles).

Coreopsis aristosa Michx.

Rare. Waste places: Norwich (Mrs. E. E. Rogers), Lebanon and Windham (Graves). Sept. Fugitive from the West.

Bidens Beckii Torr.

Water Marigold.

Rare. In ponds: Lyme (Graves), Guilford (G. H. Bartlett), Wallingford (Harger), North Haven (Eaton Herb.), Plainville (J. N. Bishop), East Granby (Harger), Danbury (Eames & C. C. Godfrey). Aug.—Sept.

GALINSOGA Ruiz & Pavon.

Galinsoga parviflora Cav. (small-flowered).

Galinsoga.

Local. Waste ground, mostly in cities. July — Sept. Adventive from tropical America.

The var. *HISPIDA* DC. (rough-hairy) is often more plentiful than the typical form.

HELENIIUM L. Sneezeweed.***Helenium nudiflorum* Nutt. (naked-flowered).**

Rare. Fields: Groton (Mrs. C. B. Graves), East Lyme (F. H. Dart), Bridgeport (Eames). June — Oct. Introduced from the South.

***Helenium autumnale* L. (autumnal).**

Sneezeweed. Staggerwort.

Occasional or frequent. Swamps and on river banks. Aug.—Oct.

The herb is used as a substitute for Arnica and in powder as a snuff for catarrh. The flowers are poisonous and cattle and horses are sometimes killed by eating freely of them.

***Helenium tenuifolium* Nutt. (fine-leaved).**

Rare. Bridgeport, in railroad wastes (Eames). Aug.—Sept. Adventive from the South.

ACHILLEA L. Yarrow.***Achillea Millefolium* L. (thousand-leaved).**

Common Yarrow. Milfoil.

Common. Fields and waste ground. June — Nov.

A form with pink or reddish flowers is grown for ornament and sometimes escapes from gardens to roadsides. The plant is medicinal.

***Achillea lanulosa* Nutt. (woolly).**

Yarrow.

Rare. Fields and waste ground: Southington (Andrews), and probably elsewhere, as it has not been distinguished from *Achillea Millefolium*. July — Aug. Introduced from the West.

ANTHEMIS L. Chamomile.***Anthemis Cotula* L. (like Cotula, the Buck's-horn).**

May-weed. Dog Fennel. Fetid Chamomile.

Common. Roadsides and waste places. June — Nov. Naturalized from Europe.

The plant is medicinal.

***Anthemis arvensis* L. (of cultivated ground).**

Corn Chamomile.

Rare. Roadsides and waste ground. May—June. Adventive from Europe.

The var. *AGRESTIS* (Wallr.) DC. (of fields) occurs rarely in waste ground.

Both the species and the variety are medicinal.

***Anthemis nobilis* L.** (well-known).

Garden Chamomile.

Rare. Wolcott, roadside near a deserted dwelling (Andrews & Bissell). Aug. Fugitive from Europe.

The plant is medicinal, the flower-heads officinal.

***Anthemis tinctoria* L.** (used for dyeing).

Golden Marguerite. Yellow Chamomile.

Rare. Roadsides and grassland as an escape from cultivation: Franklin (Mrs. E. E. Rogers), East Windsor (Bissell), Southington (Andrews), Oxford (Harger), Fairfield (Eames), Wilton (Miss A. E. Carpenter), Litchfield (Miss E. H. Thompson). June—Aug. Adventive from Europe.

Often cultivated for ornament.

MATRICARIA L. Wild Chamomile.

***Matricaria inodora* L.** (odorless).

Rare. Waste places and in grain fields: Naugatuck (B. B. Bristol), Bridgeport (Eames), Oxford and Southbury (Harger), Wilton (Miss A. E. Carpenter). June—Sept. Fugitive from Europe.

***Matricaria Chamomilla* L.** (classical name for this plant).

German Chamomile.

Rare. Naugatuck, waste ground (B. B. Bristol). July—Aug. Fugitive from Europe.

The dried flower-heads are officinal, and are much used in household practice, especially by German people.

***Matricaria suaveolens* (Pursh) Buchenau** (sweet-smelling).

Matricaria matricarioides Porter.

Matricaria discoidea DC.

Pineapple-weed.

Rare. Waste places: Naugatuck (B. B. Bristol), Bridgeport (Eames). July. Fugitive from the Pacific Coast.

CHRYSANTHEMUM L.

Chrysanthemum Leucanthemum L. (white-flowered), var. *pinnatifidum* Lecoq & Lamotte (pinnately cleft).

Chrysanthemum Leucanthemum of Manuals.

Daisy. White or Ox-eye Daisy. White-weed. Marguerite.

Common. Fields, meadows and roadsides. May—July.
Naturalized from Europe.

Often a troublesome weed in grassland. The plant is medicinal.

Chrysanthemum Parthenium (L.) Bernh. (ancient name of some plant).

Feverfew.

Rare. Waste ground as an escape from gardens. June—Aug. Introduced from Europe.

The herb is medicinal.

Chrysanthemum Balsamita L., var. *tanacetoides* Boiss. (like *Tanacetum*, the Tansy).

Costmary. Alecost. Mint Geranium.

Rare. Escaped from gardens to fields and roadsides: East Lyme (Graves), Groton (Graves & Bissell), Southington (Andrews & Bissell), Oxford (Harger), Trumbull (Eames), Wilton (Miss A. E. Carpenter). Sept.—Oct. Adventive from Asia.

Medicinal.

TANACETUM L. Tansy.

Tanacetum vulgare L. (common).

Common Tansy.

Frequent. Roadsides and waste places. July—Oct.
Naturalized from Europe.

The var. *CRISPUM* DC. (crisped) is occasional with the species.

The leaves and flowering tops are medicinal and were formerly officinal.

ARTEMISIA L. Wormwood.

Artemisia caudata Michx. (tailed).

Dry sandy ground. Common along the coast, extendi

inland as far as Wallingford and Haddam (Bissell), and Seymour (Harger). Aug.—Sept.

Artemisia campestris L. (of fields), var. *pubescens* (Jord. & Fourr.) Rouy & Foucaud (downy).

Rare. Naugatuck, in waste ground (A. E. Blewitt, Harger). Mid-Aug.—Sept. Fugitive from Europe.

Artemisia Abrotanum L. (classical name for this species).

Old Man. Southernwood.

Rare. Waste ground as an escape from gardens: Bridgeport and Fairfield (Eames). July—Oct. Fugitive from Europe.

Medicinal much like *Artemisia Absinthium*.

Artemisia vulgaris L. (common).

Common Mugwort. Felon-herb. Sailor's Tobacco.

Rare or occasional. Roadsides, waste ground and about old gardens: New London and Sprague (Graves), East Hartford (Weatherby), Southington (Andrews & Bissell), Lisbon, Oxford and Southbury (Harger), Fairfield County (Eames). July—Sept. Adventive from Europe.

The plant is medicinal.

Artemisia Dracunculus L. (classical name for this species).

Tarragon. Estragon.

Rare. Naugatuck, in waste ground (B. B. Bristol). July—Sept. Fugitive from Europe.

In Europe it is cultivated for its leaves which are used for seasoning.

Artemisia Stelleriana Bess.

Dusty Miller. Beach Wormwood. Old Woman.

Occasional on sea-shores in New London County (Graves). July—Aug. Naturalized from Asia.

Sometimes cultivated for ornament.

Artemisia biennis Willd. (biennial).

Rare. Waste ground: Bloomfield (Bissell), Naugatuck (B. B. Bristol), Stratford (Harger), New Milford (E. H. Austin). Sept. Adventive from the West.

Artemisia annua L. (annual).

Rare. Waste ground: East Lyme (Graves), Naugatuck

(B. B. Bristol), Bridgeport (Eames). Aug.—Sept. Fugitive from Asia.

Artemisia Absinthium L. (classical name for this plant).

Wormwood.

Rare. Roadsides and waste places as an escape from gardens: East Windsor (Bissell), Naugatuck (A. E. Blewitt), Oxford (Harger), Milford and Fairfield (Eames), Salisbury (Mrs. C. S. Phelps). Aug.—Sept. Adventive from Europe.

The leaves and tops were formerly much prized in domestic medicine and were until recently official.

Artemisia pontica L.

Roman Wormwood.

Rare. Roadsides as an escape from cultivation: Scotland (Graves), Southington (Weatherby & Bissell), Salisbury (Mrs. C. S. Phelps). July—Aug. Adventive from Europe.

In Europe this species is much used in the preparation of absinthe.

Artemisia frigida Willd. (cold).

Rare. Naugatuck, in waste ground (B. B. Bristol). Aug. Fugitive from the western United States.

TUSSILAGO L. Coltsfoot.

Tussilago Farfara L. (classical name for this species).

Coltsfoot. Coughwort.

Occasional or local. Wet places, roadsides and along streams, usually in heavy soils. March—May. Naturalized from Europe.

A popular remedy for coughs and colds and much used in domestic medical practice.

PETASITES Hill. Sweet Coltsfoot.

Petasites palmatus (Ait.) Gray (palmate).

Sweet Coltsfoot.

Rare. Salisbury, wet cold woods (Mrs. C. S. Phelps). April.

Petasites vulgaris Hill (common).

Petasites Petasites Karst.

Butterbur.

Rare. Hartford, escaped from a garden (Mrs. W. Seliger). April. Fugitive from Europe.

The plant is medicinal.

ERECHTITES Raf. Fireweed.

Erechtites hieracifolia (L.) Raf. (having leaves like *Hieracium*, the Hawkweed).

Erechtites praealta Raf.

Fireweed. Pilewort.

Common. Fields, roadsides and woodland clearings in either dry or moist ground; also on borders of salt marshes. July — Oct.

The plant is medicinal.

CALENDULA L. Marigold.

Calendula officinalis L. (of the shops).

Pot Marigold. Calendula. Mary-bud.

Rare. Waste ground as an escape from gardens: Southington (Andrews, Bissell), South Norwalk (Miss A. E. Carpenter). July — Aug. Fugitive from southern Europe.

This is the "Marygold" of Shakespeare. The dried flowers are medicinal, often used in the treatment of wounds.

CACALIA L. Indian Plantain.

Cacalia suaveolens L. (sweet-smelling).

Synosma suaveolens Raf.

Indian Plantain.

Dry or moist open woods or banks. Rare in most districts: East Haven (D. C. Eaton et al.), Derby (H. C. Beardslee). Local near the coast from Orange westward (Eames). July — Sept.

SENECIO L. Groundsel. Ragwort. Squaw-weed.

Senecio vulgaris L. (common).

Common Groundsel.

Rare. Waste and cultivated ground: New London (Graves), Hartford (H. S. Clark), Southington (Andrews), Bridgeport (Miss A. E. Carpenter). June — Nov. Adventive from Europe.

The plant is medicinal.

Senecio viscosus L. (sticky).

Rare. Waste ground: Stamford (Eames & W. H. Hoyt).
July — Aug. Adventive from Europe.

Senecio obovatus Muhl. (inversely egg-shaped; the broad end up).

Senecio aureus L., var. *obovatus* Torr. & Gray.

Squaw-weed. Ragwort.

Dry soil, mostly in open woods. Occasional to frequent west of the Connecticut River, but not reported from the eastern part of the state. May — June.

Senecio aureus L. (golden).

Life-root. Golden Ragweed or Ragwort. Swamp Squaw-weed.

Frequent to common. Swamps or in wet ground. May — June.

The roots and tops of this and allied species are used medicinally.

Senecio Balsamitae Muhl., var. *praelongus* Greenman (very long).

Senecio aureus L., var. *Balsamitae* Gray's Manual ed. 6 in part.

Rare. Dry grassland and open woods: Oxford and Southbury (Harger), Woodbury (Eames & C. C. Godfrey). June.

No other specimens of this variety have been seen and none of the typical form. Probably most reports of the latter are based on forms of *Senecio obovatus*.

ARCTIUM L. Burdock.**Arctium Lappa** L. (a bur).

Arctium Lappa L., var. *majus* Gray.

Great Burdock.

Roadsides and waste ground. Rare or local in the southern part of the state, becoming occasional northward. July — Sept. Naturalized from Europe.

The roots of this and allied species are officinal and the seeds and leaves are also used medicinally. Both this and the following species are unsightly weeds.

Arctium minus (Hill) Bernh. (smaller).

Arctium Lappa L., var. *minus* Gray.

Arctium Lappa L., var. *tomentosum* Gray.

Arctium tomentosum of Britton's Manual in part.

Common Burdock.

Common. Roadsides and waste places. July — Oct.
Naturalized from Europe. A form with woolly involucreal
bracts sometimes occurs.

CARDUUS L. Plumeless Thistle.

Carduus acanthoides L. (like *Acanthus*, the Bear's-breech).

Curled Thistle.

Rare. Waste ground: Salisbury (Mrs. C. S. Phelps).
July — Aug. Fugitive from Europe.

CIRSIIUM Hill. Common or Plumed Thistle.

Cirsium lanceolatum (L.) Hill (lance-shaped).

Carduus lanceolatus L.

Cnicus lanceolatus Willd.

Common or Bull Thistle.

Frequent. Roadsides and pastures. July — Sept. Natural-
ized from Europe.

Cirsium spinosissimum (Walt.) Scop. (very spiny).

Carduus spinosissimus Walt.

Cnicus horridulus Pursh.

Yellow Thistle.

Occasional in fields and borders of salt marshes along the
coast. June — July.

Rarely occurs with purple flowers.

Cirsium discolor (Muhl.) Spreng. (of different colors).

Carduus discolor Nutt.

Cnicus altissimus Willd., var. *discolor* Gray.

Field Thistle.

Fields and thickets. Occasional in most sections, but fre-
quent to common along the coast and throughout the Housa-
tonic Valley. Aug. — Sept.

Flowers sometimes white.

Cirsium altissimum (L.) Spreng. (tallest).*Carduus altissimus* L.*Cnicus altissimus* Willd.

Tall Thistle.

Rare. Introduced with garden seed about a yard, a few plants only, Salisbury (Mrs. C. S. Phelps). Aug.—Sept. Fugitive from the West.

Cirsium muticum Michx. (pointless).*Carduus muticus* Pers.*Cnicus muticus* Pursh.

Swamp Thistle.

Frequent. Swamps and moist thickets. Aug.—Sept.

Cirsium pumilum (Nutt.) Spreng. (low).*Carduus odoratus* Porter.*Cnicus pumilus* Torr.

Pasture or Bull Thistle.

Common. Fields and pastures. July — Sept.

Cirsium arvense (L.) Scop. (of cultivated ground).*Carduus arvensis* Robson.*Cnicus arvensis* Hoffm.

Canada Thistle.

Frequent. Fields, meadows, pastures and waste ground. June — Aug. Naturalized from Europe.

The var. *VESTITUM* Wimm. & Grab. (clothed) and the var. *INTEGRIFOLIUM* Wimm. & Grab. (entire-leaved) occur in grassland in Salisbury (Mrs. C. S. Phelps & Bissell); the first named variety has also been found at Orange (Weath-erby).

A pernicious weed extremely difficult to eradicate. The root is medicinal.

A statute of Connecticut enacted in 1881, provides that "Every owner or possessor of lands shall cut down all wild carrots and Canada thistles growing thereon, or in the highway adjoining, so often as to prevent them going to seed; and upon failure so to do, any person aggrieved, or any citizen of the town wherein the lands are situated, may complain to any grand juror of said town, who shall thereupon forthwith notify such owner or possessor of such complaint. If said

owner or possessor shall still neglect to comply with the provisions of this section, he shall be fined not more than five dollars, for each and every day of such neglect after such notice." Revised Statutes, sec. 1374.

ONOPORDUM L. Cotton or Scotch Thistle.

Onopordum Acanthium L.

Cotton Thistle.

Rare. Fields and roadsides: Ledyard, Groton and Waterford (Graves), New Haven (Harger). July — Sept. Adventive from Europe.

CENTAUREA L. Star Thistle.

Centaurea Jacea L.

Meadow Centaury.

Rare. Fields: Norwich (Mrs. E. E. Rogers), Guilford (G. H. Bartlett), Southington (Bissell), Bridgeport (Eames). June — Sept. Adventive from Europe.

Centaurea Jacea L., var. lacera Koch (torn).

Rare. In fields: Granby (Bissell), Naugatuck (A. E. Blewitt), Oxford (Harger), Bridgeport (Eames). June — Sept. Adventive from Europe.

Centaurea Cyanus L. (classical name for this species).

Corn-flower. Bluebottle. Bachelor's Button.

Rare. Waste ground and about gardens as an escape from cultivation: Ledyard and Lyme (Graves), East Windsor (Bissell), Southington (Andrews, Bissell), Seymour and Oxford (Harger), Fairfield County (Eames). June — Oct. Introduced from Europe.

Often cultivated for ornament. The plant is medicinal.

Centaurea nigra L. (black).

Spanish Buttons. Hardheads. Knapweed. Black Centaury.

Rare. Roadsides and waste ground: New London and Waterford (Graves), Waterbury (A. E. Blewitt), Bridgeport (Eames), Norwalk (G. P. Ells), Salisbury (Bissell). May — Aug. Introduced from Europe.

Centaurea nigra L., var. radiata DC. (bearing rays).

Rare. Waste ground: Waterbury (J. N. Bishop), Oxford

(Harger), Bridgeport (Eames). May — Aug. Introduced from Europe.

Centaurea maculosa Lam. (spotted).

Rare. Fields and waste ground: Griswold (E. F. Burleson), Granby (I. Holcomb), Litchfield (Miss E. H. Thompson), Salisbury (Mrs. C. S. Phelps). Aug. Adventive from Europe.

Centaurea vochinensis Bernh.

Rare. Fields and roadsides: Southington (Andrews & Bissell), Fairfield and Darien (G. P. Ells). June — Sept. Adventive from Europe.

LAPSANA L. Nipple-wort.

Lapsana communis L. (growing in colonies).

Nipple-wort.

Rare. Waste ground: New Haven (A. W. Evans). June — Sept. Adventive from Europe.

CICHORIUM L. Succory. Chicory.

Cichorium Intybus L. (classical name for this species).

Cichorium Intybus L., var. *divaricatum* of American authors, probably not DC.

Common Chicory. Blue Sailors.

Occasional or frequent. Fields and roadsides. June — Aug. Naturalized from Europe.

The root is medicinal; it is also used as an adulterant of and substitute for coffee. The flowers are sometimes rose-color or rarely pure white.

KRIGIA Schreb. Dwarf Dandelion.

Krigia virginica (L.) Willd.

Adopogon carolinianum Britton.

Dwarf Dandelion.

Frequent. Dry sandy or sterile ground. April — Sept.

Krigia amplexicaulis Nutt. (stem-clasping).

Adopogon virginicum Kuntze.

Cynthia.

Rare. Dry sandy soil: Litchfield (Miss E. H. Thompson),

Southbury (Mrs. H. G. Morse), Washington (C. C. Godfrey), Greenwich (W. P. Alcott). May—July.

HYPOCHAERIS L. Cat's-ear.

Hypochaeris radicata L. (having roots; referring to the long tap-roots).

Cat's-ear.

Rare. In grassland: Southington (Bissell), Bridgeport and Fairfield (Eames). July. Adventive from Europe.

Has proved to be a bad weed in some parts of New England.

LEONTODON L. Hawkbit.

Leontodon autumnalis L. (autumnal).

Fall Dandelion. Arnica.

Moist grassland. Guilford (G. H. Bartlett); and frequent or common in the town of Thompson (Weatherby & Bissell), also in Hartford County and some adjacent towns. May—Nov. Naturalized from Europe.

Leontodon autumnalis L., var. pratensis Koch (of meadows).

Fall Dandelion.

Moist grassland. Norwich (Mrs. E. E. Rogers), Litchfield (Miss E. H. Thompson); and occasional in Hartford County. May—Nov. Naturalized from Europe.

Leontodon hastilis L. (like a spear-shaft).

Rare. Southington, in fields (Bissell). May—June. Fugitive from Europe.

Leontodon nudicaulis (L.) Banks (naked-stemmed).

Leontodon hirtus L.

Local. In grassland: Waterford, plentiful at one station (Graves), East Lyme (Miss A. M. Ryon). July—Aug. Naturalized from Europe.

PICRIS L.

Picris hieracioides L. (like Hieracium, the Hawkweed).

Rare or local. Fields and waste places: Old Lyme (E. F. Williams), Guilford (G. H. Bartlett), Westport, plentiful in one locality, and Bridgeport (Eames), Salisbury

(Mrs. C. S. Phelps & Bissell). June — July. Adventive from Europe.

Picris echinoides L. (like *Echium*, the Viper's Bugloss).

Ox-tongue.

Rare. Southington, in cultivated ground (Andrews), Fairfield, in grassland (Eames). July — Sept. Fugitive from Europe.

TRAGOPOGON L. Goat's Beard.

Tragopogon porrifolius L. (having leaves like *Allium Porrum*, the Leek).

Oyster-plant. Salsify.

Rare. Fields and roadsides: Tolland (Weatherby & Bissell), Southington (Andrews, Bissell), Ridgefield (W. H. Hoyt). May — June. Adventive from Europe.

Tragopogon pratensis L. (of meadows).

Goat's Beard.

Fields and roadsides. Norwich (Mrs. E. E. Rogers), Orange (Harger), and occasional in the western part of the state. June — Sept. Naturalized from Europe.

The root is medicinal.

TARAXACUM Ludwig. Dandelion.

Taraxacum officinale Weber (of the shops).

Taraxacum Taraxacum Karst.

Common Dandelion.

Common. Fields, lawns and waste ground. April — Nov., but especially in May. Naturalized from Europe.

The root is medicinal and is officinal; it is also used as a substitute for coffee. The plant is much used as a pot-herb.

Taraxacum officinale Weber, var. **palustre** (Sm.) Blytt (of marshes).

Frequent. Moist fields and waste places. April — Nov. Naturalized from Europe.

Uses and properties as in the typical form of the species.

Taraxacum erythrospermum Andr. (red-seeded).

Red-seeded Dandelion.

Local. Usually in dry but sometimes in moist fields or

open woods. May — Nov., especially in May. Naturalized from Europe.

Uses and properties as in *Taraxacum officinale*.

SONCHUS L. Sow Thistle.

Sonchus arvensis L. (of cultivated ground).

Field Sow Thistle.

Rare. Roadsides and waste places: Norwich (W. A. Setchell), New London and Montville (Graves), Preston (Mrs. E. E. Rogers), East Hartford (Weatherby), Bridgeport (Eames). Late June — Sept. Naturalized from Europe.

Sonchus oleraceus L. (suitable for a pot-herb).

Common Sow Thistle.

Occasional. Waste and cultivated grounds. July — Oct. Naturalized from Europe.

Medicinal.

Sonchus asper (L.) Hill (rough).

Spiny-leaved Sow Thistle.

Rare to occasional. Waste ground and on shores. July — Aug. Naturalized from Europe.

LACTUCA L. Lettuce.

Lactuca scariola L.

Prickly Lettuce.

Rare. Waste ground: New London (Graves), Naugatuck (B. B. Bristol), Norwalk (Eames). July — Aug. Adventive from Europe.

The herb is medicinal.

Lactuca scariola L., var. integrata Gren. & Godr. (entire).

Lactuca virosa of American authors, not L.

Prickly Lettuce.

Occasional. Waste ground, mostly near railroads or in populous districts. Aug. — Sept. Naturalized from Europe.

The herb is medicinal.

Lactuca canadensis L.

Wild Lettuce. Horse-weed.

Common. Fields and roadsides. June — Aug.

The var. **MONTANA** Britton (of mountains), var. *integrifolia*.

folia of some authors, not *Lactuca integrifolia* Bigel., is rare or occasional with the typical form.

The plant is medicinal.

***Lactuca integrifolia* Bigel. (entire-leaved).**

Lactuca sagittifolia of Britton's Manual in part.

Rare. Roadsides and fields: Union (Bissell), Hartford (A. W. Driggs), Seymour (Eames & C. K. Averill). Probably occurring at other localities, its distribution unknown. July — Sept.

***Lactuca hirsuta* Muhl. (hairy).**

Rare. Dry woods or fields: Groton, Montville and Waterford (Graves), Norwich (Mrs. E. E. Rogers), Ellington, Bristol and Wolcott (Bissell), Southington (Andrews, Bissell), Meriden (Andrews), Oxford and Southbury (Harger), Stratford and Fairfield (Eames). July — Aug.

***Lactuca spicata* (Lam.) Hitchc. (having spikes).**

Lactuca leucophaea Gray.

Wild Blue Lettuce.

Frequent. Roadsides, thickets and woodlands. Aug.—Sept.

***Lactuca sativa* L. (sown; planted).**

Lettuce.

Rare. Waste ground as an escape from cultivation: Bridgeport (Eames). June — Aug. Fugitive from Europe. Well known as a salad plant.

CREPIS L. Hawk's Beard.

***Crepis capillaris* (L.) Wallr. (hair-like).**

Crepis virens L.

Crepis virens L., var. *dentata* Bisch.

Rare. In grassland: Groton (Graves), North Stonington and Norwich (Mrs. E. E. Rogers), Plainfield (J. L. Sheldon), East Hartford (C. C. Hanmer), East Windsor (Bissell), Oxford (Harger), Norwalk (G. P. Ells), Greenwich (W. E. Wheelock). Aug.—Sept. Adventive from Europe.

***Crepis tectorum* L. (of dwellings).**

Rare. North Stonington (Mrs. E. E. Rogers). Sept. Adventive from Europe.

Crepis taraxacifolia Thuill. (having leaves like *Taraxacum*, the Dandelion).

Rare. Southington, in grassland (Bissell). May—June.
Fugitive from Europe.

Crepis setosa Haller f. (bristly).

Rare. Fairfield, in grassland, probably introduced with grass seed (Eames). Sept.—Oct. Adventive from Europe.

Crepis rigida W. & K. (stiff).

Rare. Southington, in fields (Bissell). June—July.
Fugitive from Europe.

PRENANTHES L. Rattlesnake-root.

Prenanthes alba L. (white).

Nabalus albus Hook.

White Lettuce. Rattlesnake-root.

Rare, local or frequent. Open woods, copses and fence-rows. Aug.—Oct.

The plant and roots are medicinal.

Prenanthes serpentaria Pursh (classical name).

Nabalus serpentarius Hook.

Lion's-foot. Gall-of-the-earth.

Woods and thickets. Voluntown, Waterford and Windham (Graves), Groton and Oxford (Harger), Southington (Bissell), and occasional toward the south and southwest. Aug.—Oct.

The root and leaves are medicinal.

Prenanthes trifoliolata (Cass.) Fernald (with three leaflets).

Nabalus trifoliolatus Cass.

Prenanthes serpentaria Gray's Manual ed. 6 in part, not Pursh.
Gall-of-the-earth.

Frequent. Woods and thickets. Aug.—Oct.

Extremely variable in leaf form.

Prenanthes altissima L. (very tall).

Nabalus altissimus Hook.

Gall-of-the-earth.

Occasional or frequent. Rich woods. Aug.—Oct.

The var. *HISPIDULA* Fernald (minutely hispid) occurs at Stafford (Graves & Bissell), and Oxford (Harger).

The plant is medicinal. All species of *Prenanthes* have been used as a remedy for the bites of venomous snakes.

HIERACIUM L. Hawkweed.

Hieracium Pilosella L. (somewhat hairy).

Mouse-ear.

Rare. Dry grassland: Southington (Andrews), Wilton (Miss A. E. Carpenter). May—July. Adventive from Europe.

Hieracium aurantiacum L. (orange-colored).

Orange Hawkweed. Devil's Paint-brush. Grim the Collier.

Rare, occasional or local. Dry to wet woods, fields and roadsides. June. Naturalized from Europe.

A bad weed in some parts of northern New England.

Hieracium floribundum Wimm. & Grab. (many-flowered).

Rare. Fields and waste ground: Guilford (G. H. Bartlett), Wallingford (A. W. Evans & Harger), East Haven (Andrews), Cheshire (Bissell), Southington (M. W. Frisbie). May—June. Adventive from Europe.

Hieracium pratense Tausch (of meadows).

King Devil.

Rare. Fields: Norwich (Mrs. E. E. Rogers), Bristol (H. S. Clark & J. N. Bishop), Waterbury (A. E. Blewitt), Stamford (W. H. Hoyt). June. Adventive from Europe.

Hieracium venosum L. (veiny).

Rattlesnake-weed. Poor Robin's Plantain.

Frequent. Dry woods and fields: June—July.

The var. *SUBCAULESCENS* Torr. & Gray (having a short stem) is occasional with the species.

The leaves and tops are medicinal.

Hieracium paniculatum L. (having an open, branched flower-cluster).

Frequent. Dry woods. July—Sept.

Hieracium marianum Willd.

Rare. Dry woods: Norwich (Mrs. E. E. Rogers), Franklin (R. W. Woodward), Glastonbury (A. W. Driggs),

Orange and Oxford (Harger), Huntington and Woodbury (Eames), Salisbury (Bissell). July.

Hieracium scabrum Michx. (rough).

Frequent. Woods and thickets, mostly in dry soil. July
— Sept.

Hieracium Gronovii L.

Hairy Hawkweed.

Dry fields or open woods, in sandy or sterile soil. Frequent in most districts but not reported from Litchfield County.
Aug.— Oct.

Hieracium canadense Michx.

Canada Hawkweed.

Occasional. Fields and thickets in either moist or dry soil. Aug.— Sept.

Appendix.

ADDITIONS AND CORRECTIONS.

Page 19, under *Woodwardia virginica*, add: Stafford (Weatherby).

Page 22, under *Aspidium marginale*, add: The var. ELEGANS J. Robinson (elegant) has been found in rich woods at New Fairfield (Eames & C. C. Godfrey). Forms approaching this variety are not rare.

Page 33, after *Isoetes Dodgei*, insert:

Isoetes Dodgei A. A. Eaton, var. **Robbinsii** A. A. Eaton.

Rare. North Stonington, shallow water of Lantern Hill Pond (Graves & Bissell). July — Sept.

Page 35, under *Pinus sylvestris*, add: Wethersfield (H. S. Clark & Bissell).

Page 39, under *Sparganium eurycarpum*, after "A. W. Driggs" change text to read: East Windsor, Windsor and Sharon, at Indian Pond (Bissell). Occasional along the Housatonic River from Oxford (Harger) northward, and near the coast in New Haven and Fairfield Counties.

Page 43, under *Potamogeton bupleuroides*, add: Kent (Eames).

Page 49, under *Sorghum halepense*, add: New Haven (Bissell).

Page 51, under *Panicum philadelphicum*, add: Sharon, at Mudge Pond (Weatherby).

Page 52, under *Panicum Werneri*, add: Southbury (Weatherby), New Milford (Bissell).

Page 54, under *Panicum subvillosum*, add: Orange (Bissell).

Pages 54-55, under *Panicum villosissimum*, omit "Southbury (Harger)," and add: Kent (Bissell).

Page 66, under *Trisetum spicatum*, add: East Granby, on trap ledges (Harger).

Page 69, under *Spartina patens*, var. *caespitosa*, add: Bridgeport (Eames).

Page 72, under *Briza media*, add: Southbury, along roadside (Harger).

Page 72, under *Cynosurus cristatus*, add: Oxford, in a lawn (Harger).

Page 77, under *Bromus commutatus*, add: Middletown, at several widely separated localities (Bissell). Omit "Fugitive" and substitute: Adventive.

Page 77, after *Bromus tectorum*, insert:

Bromus sterilis L. (sterile).

Local. Middletown, well established on sandy railroad embankments (Bissell). June. Adventive from Europe.

Pages 77-78, under *Bromus altissimus*, add: Franklin (R. W. Woodward).

Page 78, after *Bromus altissimus*, insert:

Bromus incanus (Shear) Hitchc. (hoary).

Rare. Putnam, thicket near river bank (Weatherby & Bissell). July — Aug.

Page 81, after *Elymus canadensis*, insert:

Elymus brachystachys Scribn. & Ball (short-spiked).

Rare. Naugatuck, in dry ground, introduced with mill waste (A. E. Blewitt). Fugitive from the southwestern United States.

Page 84, under *Eleocharis diandra*, add: Hartford (Bissell).

Page 84, under *Eleocharis ovata*, add: Hartford (Weatherby & Bissell).

Page 85, under *Eleocharis intermedia*, add: Sharon, at Indian Pond (R. W. Woodward).

Page 87, under *Scirpus rubrotinctus*, add: New Milford (Harger).

Page 87, under *Scirpus atrovirens*, add: Franklin (R. W. Woodward), New Britain and Canaan* (Bissell).

Page 88, under *Scirpus cyperinus*, var. *pelius*, add: Colebrook and Salisbury (M. L. Fernald).

Page 90, under *Rhynchospora alba*, add: the var. *MACRA* Clarke (large) occurs at Southington (Bissell).

Page 92, under *Carex tribuloides*, var. *reducta*, change statement of range to read: Rare or occasional in the northern half of the state.

Page 93, under *Carex straminea*, change statement of range to read: Occasional or local in the northern half of the state.

Page 94, under *Carex foenea*, var. *perplexa*, add: Thomaston (A. E. Blewitt).

Page 96, after *Carex trisperma*, insert:

Carex trisperma Dewey, var. **Billingsii** Knight.

Local. Bethany, plentiful in a swamp (B. B. Bristol & A. E. Blewitt). June—July.

Page 98, under *Carex aurea*, add: Sherman (A. E. Blewitt & Harger).

Page 99, under *Carex Davisii*, add: East Granby (Harger).

Page 100, under *Carex aestivalis*, add: Colebrook (M. L. Fernald).

Page 100, after *Carex umbellata*, insert:

Carex umbellata Schk., var. **brevirostris** Boott (short-beaked).

Rare. Cheshire, dry rocky hills (A. E. Blewitt). June. Very large plants growing in large tufts.

Page 101, under *Carex polymorpha*, add: Waterbury (A. E. Blewitt).

Page 104, under *Carex flava*, add: Waterbury (A. E. Blewitt).

Page 105, under *Carex castanea*, add: Canaan, moist sandy thicket (Mrs. C. S. Phelps & A. E. Blewitt).

Page 106, under *Carex trichocarpa*, add: New Milford, plentiful in meadows along the Housatonic River.

Page 107, under *Carex retrorsa*, add: Sherman (A. E. Blewitt & Harger).

Page 108, under *Carex intumescens*, var. *Fernaldii*, add: Colebrook, many plants in rich woods (M. L. Fernald).

Page 112, under *Wolffia columbiana*, add: Orange (Harger).

Page 112, before *Xyris caroliniana*, insert:
Xyris montana Ries (of mountains).

Rare. Woodbury, in sphagnum bog (Harger). July—Aug.

Pages 114-115, under *Juncus tenuis*, var. *anthelatus*, add: East Haven (Bissell).

Page 115, under *Juncus Dudleyi*, change statement of habitat and range to read: Sandy or sterile ground, in either moist or dry places. East Granby (Harger), South Windsor (Bissell), Meriden (Andrews), and occasional in the north-western part of the state.

Pages 115-116, under *Juncus brachycephalus*, add: Kent (Eames), New Milford (Bissell).

Page 123, under *Smilacina trifolia*, add: Stafford (Weatherby).

Page 131, under *Habenaria orbiculata*, add: Ledyard (B. T. Avery, Jr.).

Page 133, under *Pogonia affinis*, add: Ledyard (B. T. Avery, Jr.).

Page 134, under *Spiranthes cernua*, var. *ochroleuca*, add: Occasional in the southern part of the state.

Page 136, under *Microstylis monophyllos*, add: Colebrook (Bissell).

Pages 139-140, under *Salix discolor*, var. *eriocephala*, add: Durham (J. Barratt).

Pages 139-140, under *Salix discolor*, var. *prinoides*, add: Durham (J. Barratt).

Page 140, after *Salix sericea*, insert:

Salix subsericea (Anders.) Schneider (somewhat silky).

Rare or local. Colebrook, wet ground along roadsides and borders of woods (M. L. Fernald & Bissell). April — mid-May; fruit May — June.

Page 143, under *Myrica Gale*, omit "not reported from the vicinity of the coast."

Page 146, after *Corylus rostrata*, insert:

Corylus heterophylla Fisch. (various-leaved).

Rare. Wethersfield, sparingly escaped about an old nursery (H. S. Clark & Bissell). April; fruit Sept. Fugitive from Europe.

Page 154, under *Maclura pomifera*, add: Wethersfield (Bissell).

Page 158, under *Rumex elongatus*, add: New Britain (Bissell).

Pages 160-161, under *Polygonum lapathifolium*, add: The var. **NODOSUM** (Pers.) Weinmann (knotty) occurs at Lyme (Graves & Bissell).

Page 164, under *Polygonum cuspidatum*, add: Southington (Andrews).

Page 165, under *Cycloloma atriplicifolium*, add: Danbury (Eames & C. C. Godfrey).

Page 165, under *Kochia Scoparia*, add: New London (Graves), Derby, along a roadside (Harger).

Page 167, under *Beta vulgaris*, add: Sometimes found about dumping grounds.

Page 169, under *Salsola Kali*, add: The var. CAROLINIANA (Walt.) Nutt. occurs with the typical form.

Page 173, after *Spergularia marina*, insert:
***Spergularia canadensis* (Pers.) Don.**

Buda borealis Wats.

Tissa canadensis Britton.

Rare. Groton, border of salt marsh at Esker Point (Graves & Bissell). June — Aug.

Page 179, under *Silene noctiflora*, add: Winchester (M. L. Fernald & Weatherby).

Page 186, under *Ranunculus sceleratus*, add: Wethersfield (Dr. E. J. Thompson), Newington (Bissell).

Page 186, under *Ranunculus allegheniensis*, add: Redding (Eames & C. C. Godfrey).

Page 191, after *Nigella sativa*, insert:
***Nigella damascena* L.**

Love-in-a-Mist.

Rare. Newtown, about a garden (Eames & C. C. Godfrey).
June. Fugitive from Eurasia.

Sometimes cultivated for ornament.

Page 194, under *Podophyllum peltatum*, add: Perhaps native at Southington (Bissell).

Page 196, under *Eschscholtzia californica*, add: Roadside, Salisbury (R. W. Woodward & Weatherby).

Page 200, under *Alyssum alyssoides*, add: Griswold (E. F. Burleson).

Page 201, after *Lepidium campestre*, insert:
***Lepidium Draba* L. (like *Draba*, the Whitlow Grass).**
Hoary Cress..

Rare. Guilford, a few plants in a field (G. H. Bartlett).
May—June. Fugitive from Europe.

Page 202, under *Brassica alba*, add: Hartford (Bissell).

Page 242, under *Rosa setigera*, add: Middlefield (Bissell).

Page 242, under *Rosa spinosissima*, add: Cornwall
(Miss M. J. Whitney).

Page 292, under *Epilobium adenocaulon*, add: Monroe
(Harger).

Page 347, after *Lycium halimifolium*, insert:

HYOSCYAMUS L. Henbane.

Hyoscyamus niger L. (black).

Black Henbane.

Rare. Middletown, in waste ground (J. Barratt). June —
July. Fugitive from Europe.

The plant is medicinal, the leaves of the second year's
growth official.

Page 396, after *Bidens comosa*, insert:

Bidens connata Muhl. (united).

Rare. Swamps and borders of streams: Lyme (Graves
& Bissell), Huntington and Milford (Harger). Aug.—Sept.

NATIVE PLANTS NOT FOUND IN RECENT YEARS.

The species named below were found growing in Connecticut
by former collectors whose specimens have been preserved, but
none of them have been seen within the last twenty years, and
most of them have not been found for a much longer period.
They are listed here to call special attention to them that it may
be ascertained whether they can at present be found growing in
the state or not.

Lycopodium Selago L.

Isoetes foveolata A. A. Eaton.

Sparganium angustifolium Michx.

Sparganium fluctuans (Morong) Robinson.
Potamogeton lateralis Morong.
Elymus australis Scribn. & Ball.
Carex livida (Wahlenb.) Willd.
Melanthium latifolium Desr.
Euphorbia Ipecacuanhae L.
Acerates viridiflora Ell., var. *lanceolata* (Ives) Gray.
Trichostema lineare Walt.
Helianthus trachelifolius Mill.
Bidens trichosperma (Michx.) Britton.

EXCLUDED SPECIES.

The following species and varieties, reported from Connecticut in earlier lists, have been omitted from the present Catalogue, either because of known errors, or because no authentic specimens of them have been found.

The names are those of the older lists; in all cases, however, in which they differ from those in the seventh edition of Gray's Manual, the latter are also given, after the original names.

Abbreviations indicate the list or lists in which each species appears. These abbreviations and the lists they represent, are as follows:

- Berz.** A Catalogue of the Flowering Plants and Higher Cryptogams growing without cultivation within thirty miles of Yale College. Published by the Berzelius Society. New Haven, 1878.
- B1.** Bishop, James N. A Catalogue of all Phaenogamous Plants at present known to grow in the State of Connecticut. Rep. Sec. Conn. Board Agric. 1884-5. Hartford, 1885.
- B2.** Same, 2d edition. Vascular Cryptogams added. Rep. Sec. Conn. Board Agric. 1895. Hartford, 1896.
- Ba.** Same, Additions and Corrections. Rep. Sec. Conn. Board Agric. 1897. Hartford, 1898.
- B3.** Same, 3d edition. Rep. Sec. Conn. Board Agric. 1900. Hartford, 1901.

- Biss.** Bissell, C. H. Fern Flora of Connecticut. Fern Bulletin, vol. xiv, 1906.
- B. & A.** Bissell, C. H., and Andrews, Luman. Flora of the Town of Southington and Vicinity. Conn. School Document No. 222. [Hartford] 1902.
- Br.** Brace, John P. List of Plants growing spontaneously in Litchfield and in its Vicinity. American Jour. of Science, vol. iv, 1822.
- C. & S.** Case, George R., and Setchell, William A. A Catalogue of Wild Plants growing in Norwich and Vicinity, arranged in the order of flowering for the year 1882. Norwich, 1883.
- D.** Driggs, A. W. Notes on the Flora of Connecticut. Conn. School Document No. 198. [Hartford] 1901.
- Leon.** Leonard, Emily J. Catalogue of the Phaenogamous and Vascular Cryptogamous Plants found growing in Meriden, Conn. Trans. Meriden Sci. Ass., 1, 1884. Meriden, 1885.
- R.** Rogers, Mrs. Elisha E. Flora of Norwich. Conn. School Document No. 213. [Hartford] 1902.

Cryptogramma acrostichoides R. Br. **Biss.**

An error in transcribing. Should have read *Cryptogramma Stelleri*.

Asplenium viride Huds. **B₂.**

Noted as doubtful by Bishop.

Dryopteris aculeata Braunii (Spenner) Underw. *Polystichum Braunii* (Spenner) Fée **B₂.**

Botrychium Lunaria Sw. **B₂, B₃, R.**

Probably *Botrychium simplex*.

Isoetes lacustris L. **B₂, B₃.**

An error in determination. Plant was *Isoetes Tuckermani*.

Pinus inops Ait. *Pinus virginiana* Mill. **Ba.**

An error in determination. Tree was *Pinus sylvestris*.

Juniperus Sabina L., var. *procumbens* Pursh. *Juniperus horizontalis* Moench. **B₂, B₃.**

An error in determination. Plant was *Juniperus communis*, var. *depressa*.

Potamogeton crispus L. B₂, B₃.

Triglochin palustris L. Berz., B₁, B₂, B₃.

Paspalum laeve Michx. Berz., B₁, B₂, B₃, R.

Avena fatua L. B₂, B₃.

Danthonia sericea Nutt. Leon.

Poa flexuosa Muhl. *Poa autumnalis* Muhl. B₁, B₂, B₃.

Festuca ovina L., var. *duriuscula* Hack. B_a, B₃.

An error in determination. Plant was *Festuca rubra*.

Cyperus Houghtonii Torr. B₃.

An error in determination. Plant was *Cyperus filiculmis*.

Scirpus supinus L., var. *Hallii* Gray. *Scirpus Hallii* Gray.
B₂.

Rynchospora capillacea Torr. B₂, B₃.

Carex adusta Boott. Berz., B₁.

Carex exilis Dewey. C. & S., B₃, R.

Perhaps correct, but no specimen has been seen by the committee.

Carex Goodenowii J. Gay. B₃.

Lemna perpusilla Torr. B_a.

Juncus scirpoides Lam. B₁, B₂, B₃.

Helonias bullata L. Leon.

Allium sativum L. B₁, B₂, B₃.

Lilium Catesbaei Walt. Leon.

Cypripedium arietinum R. Br. Berz., B₁, B₂, B₃.

Perhaps correct, but no specimen has been seen.

Cypripedium candidum Willd. B₃, D.

Habenaria rotundifolia Richards. *Orchis rotundifolia* Banks.
B₁, B₂, B₃.

Probably actually collected by Dr. J. W. Robbins, but no specimen has been seen.

Habenaria peramoena Gray. Leon.

Salix petiolaris Sm. B₃.

An error in determination.

Alnus viridis DC. B₃.

Rumex sanguineus L. B₂, B₃.

Rumex maritimus L. *Rumex persicarioides* L. B₁, B₂.

Polygonum maritimum L. B₂.

Chenopodium Bonus-Henricus L. B₂, B₃.

An error in determination. Plant was *Atriplex patula*,
var. *hastata*.

Stellaria pubera Michx. Leon.

Cerastium viscosum L. Berz., C. & S., B₁, B₂, B₃, R.

Holosteum umbellatum L. Leon.

Silene nivea Otth. B₂, B₃.

Talinum teretifolium Pursh. Berz., B₁, B₂, B₃.

Specimen extant, but not certainly from Connecticut.

Ranunculus Flammula L. Br.

Thalictrum clavatum DC. Leon.

Berberis canadensis Pursh. B₂.

An error in determination. Plant was *Berberis vul-*
garis.

Crataegus tomentosa L. Berz., Leon., B₁, B₃.

Geum macrophyllum Willd. B₂, B₃.

Probably *Geum strictum*.

Rubus invisus Bailey. B. & A.

An error in determination. Plant was a form of *Rubus*
villosus.

Baptisia australis R. Br. Leon.

Trifolium medium L. Leon.

Desmodium strictum DC. B₃.

Clitoria mariana L. Leon.

Euphorbia glyptosperma Engelm. Ba, B₃.

Euphorbia dentata Michx. Br., Leon.

Vitis indivisa Willd. *Cissus Ampelopsis* Pers. **Leon.**

Vitis bipinnata Torr. & Gray. *Cissus arborea* (L.) Des Moulins. **Leon.**

Vitis cordifolia Michx. **Berz., Leon., B₁, B₂, B₃, R.**

An error in determination. Plant was *Vitis vulpina*.

Helianthemum corymbosum Michx. **Leon.**

Viola striata Ait. **B₁, B₂, B₃.**

Specimens extant, but not certainly from Connecticut.

Viola canina L. **Leon.**

Probably carelessly written for *Viola canina*, var. *sylvestris* of Gray's Manual ed. 5 (= *Viola conspersa*).

Opuntia Rafinesquii Engelm. **Berz., B₁, B₂, B₃.**

Epilobium Hornemanni Reichenb. **B₂.**

An error in determination. Plant was probably *Epilobium adenocaulon*.

Hippuris vulgaris L. **Berz., B₁, B₂, B₃.**

Bupleurum rotundifolium L. **Berz., B₁, B₂, B₃.**

Probably correct, but no specimen has been seen.

Thaspium aureum Nutt. **Br. (as Smyrneum), C & S., Leon., B₁, B₂.**

Probably *Zizia aurea*.

Thaspium trifoliatum Gray. **Berz., B₁, B₂.**

Probably *Zizia aurea*.

Thaspium barbinode Nutt. **C. & S.**

An error in determination.

Azalea arborescens Pursh. *Rhododendron arborescens* (Pursh) Torr. **Leon.**

Vaccinium arboreum Marsh. **C. & S.**

An error in determination.

Vaccinium corymbosum Ait., var. *pallidum* Gray. **Leon.**

Samolus Valerandi L. **B₂, B₃, R.**

Probably *Samolus floribundus*.

Gentiana Amarella L. **B₂, B₃.**

Probably *Gentiana quinquefolia*.

Gentiana Saponaria L. Br., B₂.

Probably *Gentiana Andrewsii*.

Apocynum cannabinum L., var. *hypericifolium* Gray. Ba.

Periploca graeca L. Leon.

Perhaps correct, but no specimen has been seen.

Asclepiodora viridis Gray. B₂.

Probably meant for *Acerates viridiflora*.

Asclepias paupercula Michx. *Asclepias lanceolata* Walt.
Leon.

Asclepias ovalifolia Decsne. Leon.

Asclepias parviflora Pursh. *Asclepias perennis* Walt. Leon.

Cuscuta tenuiflora Engelm. *Cuscuta Cephalanthi* Engelm.
Leon.

Ajuga reptans L. Berz., B₁, B₂, B₃, B. & A.

An error in determination. The plant was *Ajuga gen-
eensis*.

Isanthus caeruleus Michx. *Isanthus brachiatus* (L.) BSP.
Br., B₂, B₃.

Scutellaria saxatilis Riddell. Leon.

Lamium album L. Berz., B₁, B₂, B₃, B. & A.

Probably wrong determination. In two cases the plant
is known to have been a white-flowered form of *Lamium
maculatum*.

Stachys palustris L., var. *cordata* Gray. *Stachys cordata* Rid-
dell. Berz., B₁, B₂, B₃.

Probably a form of *Stachys tenuifolia*, var. *aspera*.

Monarda punctata L. Leon.

Satureja hortensis L. Berz., B₁, B₂, B₃.

Pycnanthemum aristatum Michx. Br.

Mentha rotundifolia L. B₁, B₂, B₃.

Physalis pubescens L. Leon., B₁, B₂.

Linaria genistifolia Mill. C. & S.

Antirrhinum majus L. B₃.

Mimulus Jamesii Torr. *Mimulus glabratus* HBK., var. *Jamesii* (Torr. & Gray) Gray. **Ba.**

An error in determination. Probably *Minulus Langsdorffii*.

Micranthemum Nuttallii Gray. *Micranthemum micranthemoides* (Nutt.) Wettst. **B₁, B₂, B₃,**

Veronica Anagallis L. *Veronica Anagallis-aquatica* L. **B₂.**
Probably *Veronica americana*.

Veronica Beccabunga L. **Br.**

Veronica agrestis L. **C. & S.**

Gerardia linifolia Nutt. **Leon.**

Utricularia striata LeConte. *Utricularia fibrosa* Walt. **Br.**

Lonicera Caprifolium L. **Leon., B₁, B₂, B₃.**

Valeriana edulis Nutt. **B₁, B₂, B₃.**

Campanula americana L. **C. & S., Leon.**

C. & S. report later corrected by them.

Liatris squarrosa Willd. **B₂, B₃.**

An error in determination. Plant was *Liatris scariosa*.

Liatris cylindracea Michx. **B₂, B₃.**

Chrysopsis mariana Nutt. **B₃.**

Specimens extant, but not certainly from Connecticut.

Solidago stricta Ait. **Leon.**

Aster concolor L. **B₁, B₂, B₃.**

Aster sagittifolius L. **B₂, B₃.**

Aster salicifolius Willd. **B₂, B₃.**

An error in determination.

Diplopappus amygdalinus Torr. & Gray. *Aster umbellatus* Mill., var. *latifolius* Gray. **Leon.**

Helianthus angustifolius L. **B₂, B₃.**

Helianthus doronicoides Lam. **B₁, B₂, B₃.**

Coreopsis rosea Nutt. **B₃.**

In **B₃** occurs also the combination *Helianthus scabra* (sic),

without author citation, and in **Leon.** the combinations *Saponaria inflata*, *Ampelopsis trifolia* and *Centaurea arvense* (sic). Of these the first two are probably errors for *Heliopsis scabra* and *Silene inflata* respectively. The others are presumably mistakes of the same sort, but it is not apparent for what they were intended.

According to Britton's Manual, 3d ed., *Scleria reticularis* Michx., var. *pubescens* Britton, occurs in Connecticut; and, on the strength of presumably reliable records, Gray's Manual, 7th ed., credits *Setaria imberbis* R. & S. to the state. The committee, however, have seen no specimens of these plants from Connecticut, and they are therefore omitted from the present Catalogue.

FUGITIVE SPECIES.

The species named in the following lists of fugitives are known to have occurred spontaneously in Connecticut, thus requiring mention in the Catalogue. For convenience of reference they are given in their proper place under the families to which they belong. They are not, however, to be regarded as properly forming a part of our uncultivated flora, and in making up the tables of statistics that follow they are left out of account entirely.

These fugitives may be separated into groups as follows:

GROUP I.

Species of which neither seed nor plant is ordinarily hardy in this climate and which can therefore continue but for a single season; mostly plants of dumping grounds.

Zea Mays L.

Eichhornia crassipes (Mart.) Solms.

Cicer arietinum L.

Vicia Faba L.

Pisum sativum L.

Pisum sativum L., var. *arvense* (L.) Poir.

Phaseolus vulgaris L.

Phaseolus vulgaris L., var. *nanus* (L.) Taubert.

Ricinus communis L.

Abutilon pictum (Gill.) Walp.
Hibiscus esculentus L.

GROUP 2. .

Annual or biennial species cultivated either for use or ornament, that persist for a year or two in the locality where cultivated or where the seeds may be accidentally scattered ; perennials, often grown for ornament, that rarely escape and maintain themselves for a few years and later disappear ; and species that appear spontaneously but remain only a year or two.

Polypogon monspeliensis (L.) Desf.
Avena sativa L.
Cynodon Dactylon (L.) Kuntze.
Secale cereale L.
Triticum sativum Lam.
Hordeum vulgare L.
Cyperus fuscus L.
Juncus brachycarpus Engelm.
Sisyrinchium albidum Raf.
Fagopyrum esculentum Moench.
Beta vulgaris L.
Portulaca grandiflora Hook.
Papaver Rhoeas L.
Argemone alba Lestib.
Argemone mexicana L.
Lobularia maritima (L.) Desv.
Lepidium sativum L.
Raphanus sativus L.
Brassica Napus L.
Brassica Rapa L.
Brassica oleracea L.
Lunaria annua L.
Cleome spinosa L.
Reseda alba L.
Cytisus scoparius (L.) Link.
Trifolium incarnatum L.
Glycyrrhiza lepidota (Nutt.) Pursh.
Geranium dissectum L.
Anethum graveolens L.

Lysimachia vulgaris L.
Ipomoea coccinea L.
Verbena officinalis L.
Salvia pratensis L.
Salvia splendens Ker.
Capsicum annuum L.
Solanum tuberosum L.
Datura meteloides DC.
Nicotiana rustica L.
Nicotiana Tabacum L.
Linaria Elatine (L.) Mill.
Pentstemon grandiflorus Nutt.
Citrullus vulgaris Schrad.
Cucumis Melo L.
Cucumis sativus L.
Cucurbita maxima Duchesne.
Cucurbita moschata Duchesne.
Cucurbita Pepo L.
Cucurbita Pepo L., var. *condensa* Bailey.
Anthemis nobilis L.
Artemisia Abrotanum L.
Calendula officinalis L.
Cirsium altissimum (L.) Spreng.
Leontodon hastilis L.
Lactuca sativa L.
Crepis taraxacifolia Thuill.
Crepis rigida W. & K.

GROUP 3.

Species that are cultivated and inclined to escape, and species that appear spontaneously, the latter mostly brought in with hay or grain, with grass or clover seed, in mill supplies and by railroads; that are of so recent introduction or have been so little observed that it is not yet known whether they will persist.

The line drawn between this group and a number of species regarded as adventive is of necessity somewhat arbitrary, and no doubt further observation will show that some of the species listed here have become a part of our uncultivated flora. It is

also possible that a species now considered adventive and well established may later disappear.

Sorghum halepense (L.) Pers.
Echinochloa frumentacea (Roxb.) Link.
Bromus squarrosus L.
Agropyron tenerum Vasey.
Elymus brachystachys Scribn. & Ball.
Salix incana Schrank.
Corylus heterophylla Fisch.
Cycloloma atriplicifolium (Spreng.) Coulter.
Chenopodium capitatum (L.) Aschers.
Atriplex tatarica L.
Acnida tuberculata Moq.
Acnida tuberculata Moq., var. *prostrata* (U. & B.) Robinson.
Mirabilis Jalapa L.
Anychia polygonoides Raf.
Tetragonia expansa Murr.
Gypsophila muralis L.
Gypsophila elegans Bieb.
Nigella sativa L.
Nigella damascena L.
Eschscholtzia californica Cham.
Lepidium ruderales L.
Lepidium Draba L.
Iberis amara L.
Camelina sativa (L.) Crantz.
Camelina microcarpa Andrz.
Neslia paniculata (L.) Desf.
Brassica japonica Siebold.
Diploaxis muralis (L.) DC.
Conringia orientalis (L.) Dumort.
Alliaria officinalis Andrz.
Sisymbrium canescens Nutt.
Sisymbrium Sophia L.
Iodanthus pinnatifidus (Michx.) Steud.
Reseda Luteola L.
Reseda odorata L.
Philadelphus inodorus L.
Deutzia scabra Thunb.

Ribes nigrum L.
Filipendula hexapetala Gilib.
Sanguisorba minor Scop.
Cercis canadensis L.
Medicago arabica Huds.
Medicago hispida Gaertn.
Hosackia americana (Nutt.) Piper.
Vicia hirsuta (L.) S. F. Gray.
Lens esculenta Moench.
Geranium pratense L.
Geranium molle L.
Erodium cicutarium (L.) L'Hér.
Erodium moschatum (L.) L'Hér.
Cardiospermum Halicacabum L.
Sida spinosa L.
Oenothera laciniata Hill.
Eryngium planum L.
Coriandrum sativum L.
Forsythia viridissima Lindl.
Sabatia campestris Nutt.
Ellisia Nyctelea L.
Phacelia viscida (Benth.) Torr.
Phacelia Purshii Buckley.
Amsinckia lycopsoides Lehm.
Borago officinalis L.
Verbena canadensis (L.) Britton.
Sideritis montana L.
Agastache Foeniculum (Pursh) Kuntze.
Galeopsis Ladanum L.
Physalis angulata L.
Hyoscyamus niger L.
Datura Metel L.
Verbascum phlomoides L.
Verbascum Pseudo-Lychnitis Schur.
Linaria minor (L.) Desf.
Antirrhinum Orontium L.
Digitalis purpurea L.
Veronica hederaefolia L.
Martynia louisiana Mill.

Galium Wirtgenii F. Schultz.
Valerianella Locusta (L.) Betcke.
Knautia arvensis (L.) T. Coulter.
Momordica Charantia L.
Campanula patula L.
Campanula carpatica Jacq.
Jasione montana L.
Grindelia squarrosa (Pursh) Dunal.
Ambrosia bidendata Michx.
Lepachys pinnata (Vent.) Torr. & Gray.
Helianthus debilis Nutt.
Helianthus debilis Nutt., var. *cucumerifolius* (Torr. & Gray) Gray.
Helianthus Maximiliani Schrad.
Bidens leucantha Willd.
Bidens aristosa (Michx.) Britton.
Matricaria inodora L.
Matricaria Chamomilla L.
Matricaria suaveolens (Pursh) Buchenau.
Artemisia campestris L., var. *pubescens* (Jord. & Fourr.) Rouy & Foucaud.
Artemisia Dracunculus L.
Artemisia annua L.
Artemisia frigida Willd.
Petasites vulgaris Hill.
Carduus acanthoides L.
Centaurea nigra L., var. *radiata* DC.
Picris echioides L.

Total number of fugitive species and varieties listed 169.

STATISTICAL SUMMARIES.

TABULAR LIST OF FAMILIES.

Families.	Genera.		Species.		Varieties and Named Forms.	
	Native.	Introd.	Native.	Introd.	Native.	Introd.
PTERIDOPHYTA						
Polypodiaceae	16	...	37	...	10	...
Schizaeaceae	1	...	1	...	...	...
Osmundaceae	1	...	3	...	3	...

Families.	Genera.		Species.		Varieties and Named Forma.	
	Native.	Introd.	Native.	Introd.	Native.	Introd.
Ophioglossaceae	2	...	7	...	2	...
Marsileaceae	1	...	1	...	...	...
Equisetaceae	1	...	8	...	1	...
Lycopodiaceae	1	...	8	...	3	...
Selaginellaceae	1	...	2	...	...	...
Isoëtaceae	1	...	7	...	3	...

SPERMATOPHYTA

GYMNOSPERMAE

Taxaceae	1	...	1	...	...	...
Pinaceae	8	...	12	4	1	...

ANGIOSPERMAE

MONOCOTYLEDONEAE

Typhaceae	1	...	2	...	...	...
Sparganiaceae	1	...	7	...	2	...
Najadaceae	5	...	33	...	10	...
Juncaginaceae	2	...	2	...	...	...
Alismaceae	3	...	9	...	7	...
Hydrocharitaceae	2	...	2	...	...	...
Gramineae	47	10	146	41	13	3
Cyperaceae	12	...	174	...	72	...
Araceae	6	...	7	...	...	...
Lemnaceae	3	...	5	...	...	...
Eriocaulaceae	1	...	1	...	...	...
Xyridaceae	1	...	4	...	...	...
Commelinaceae	1	1	1	1	...	...
Pontederiaceae	2	...	3	...	1	...
Juncaceae	2	...	20	...	6	...
Liliaceae	17	7	30	12	...	...
Haemodoraceae	1	...	1	...	...	...
Dioscoreaceae	1	...	1	...	...	...
Amoryllidaceae	1	2	1	3	...	...
Iridaceae	2	1	6	4	...	...
Orchidaceae	12	...	40	...	2	...

DICOTYLEDONEAE

Piperaceae	1	...	1	...	...	...
Salicaceae	2	...	18	8	5	1
Myricaceae	1	...	3	...	...	...
Juglandaceae	2	...	7	...	...	...
Betulaceae	5	...	11	...	1	...
Fagaceae	3	...	14	...	...	...
Urticaceae	9	3	11	9	2	...
Santalaceae	1	...	1	...	...	...
Loranthaceae	1	...	1	...	...	...

Families.	Genera.		Species.		Varieties and Named Forms.	
	Native.	Introd.	Native.	Introd.	Native.	Introd.
Aristolochiaceae	2	...	2	...	2	...
Polygonaceae	3	...	22	14	8	...
Chenopodiaceae	5	1	12	7	2	3
Amaranthaceae	2	...	2	6	...	1
Phytolaccaceae	1	...	1	...	...	...
Nyctaginaceae	...	1	...	3	...	...
Illecebraceae	1	1	1	1	...	...
Aizoaceae	...	1	...	1	...	...
Caryophyllaceae	6	5	11	24	1	...
Portulacaceae	1	1	2	1	...	...
Ceratophyllaceae	1	...	1	...	1	...
Nymphaeaceae	4	...	7	...	1	...
Ranunculaceae	13	1	37	5	5	1
Magnoliaceae	1	...	1	...	...	...
Menispermaceae	1	...	1	...	...	...
Berberidaceae	1	2	1	2	...	...
Lauraceae	2	...	2	...	...	...
Papaveraceae	1	2	1	3	...	...
Fumariaceae	3	1	4	1	...	...
Cruciferae	9	9	22	25	1	1
Capparidaceae	1	...	1	1	...	...
Resedaceae	...	1	...	1	...	...
Sarraceniaceae	1	...	1	...	...	...
Droseraceae	1	...	2	...	...	...
Podostemaceae	1	...	1	...	...	...
Crassulaceae	2	2	3	3	...	...
Saxifragaceae	7	1	15	6	...	...
Hamamelidaceae	2	...	2	...	...	...
Platanaceae	1	...	1	...	...	...
Rosaceae	15	5	79	35	21	3
Leguminosae	13	8	38	23	1	1
Linaceae	1	...	4	1	...	...
Oxalidaceae	1	...	5	1	...	...
Geraniaceae	1	...	3	1	...	...
Rutaceae	1	1	1	1	...	...
Simarubaceae	...	1	...	1	...	...
Polygalaceae	1	...	7	...	1	...
Euphorbiaceae	3	...	8	6	...	...
Callitrichaceae	1	...	3	...	...	...
Limnanthaceae	1	...	1	...	...	...
Anacardiaceae	1	...	6	...	1	...
Aquifoliaceae	2	...	5	...	2	...
Celastraceae	1	1	1	3	...	...
Staphyleaceae	1	...	1	...	...	...
Aceraceae	1	...	6	2	...	1

Families.	Genera.		Species.		Varieties and Named Forms.	
	Native.	Introd.	Native.	Introd.	Native.	Introd.
Sapindaceae	...	1	...	1	...	...
Balsaminaceae	1	...	2	...	...	...
Rhamnaceae	2	...	2	1	...	...
Vitaceae	2	...	6	...	1	...
Tiliaceae	1	...	2	1	...	...
Malvaceae	1	3	1	10	...	...
Hypericaceae	1	...	11	2	...	...
Elatinaceae	1	...	1	...	...	...
Cistaceae	3	...	9	...	1	...
Violaceae	1	...	25	3	1	...
Cactaceae	1	...	1	...	...	...
Thymelaeaceae	1	...	1	...	...	...
Lythraceae	4	...	4	1	...	...
Melastomaceae	1	...	1	...	...	...
Onagraceae	5	...	21	1	3	...
Haloragidaceae	2	...	6	...	2	...
Araliaceae	2	1	5	2	...	...
Umbelliferae	15	10	23	10	1	...
Cornaceae	2	...	8	...	...	...
Ericaceae	18	...	39	...	8	...
Plumbaginaceae	1	...	1	...	...	...
Primulaceae	5	1	9	3	...	1
Ebenaceae	1	...	1	...	...	...
Oleaceae	1	2	3	3	1	...
Gentianaceae	5	...	9	...	...	...
Apocynaceae	1	1	3	1	1	...
Asclepiadaceae	2	1	10	1	2	...
Convolvulaceae	3	...	7	5	1	...
Polemoniaceae	2	...	2	3	...	1
Hydrophyllaceae	1	...	1	...	...	...
Boraginaceae	4	4	6	10	...	...
Verbenaceae	1	...	3	2	...	...
Labiatae	15	14	34	31	4	1
Solanaceae	2	6	5	12	2	...
Scrophulariaceae	15	1	32	12	1	2
Lentibulariaceae	1	...	10	...	...	...
Orobanchaceae	3	...	3	...	...	...
Bignoniaceae	...	2	...	2	...	...
Phrymaceae	1	...	1	...	...	...
Plantaginaceae	1	...	5	2	1	...
Rubiaceae	5	1	17	4	1	...
Caprifoliaceae	6	1	20	6	2	...
Valerianaceae	1	1	1	1	...	...
Dipsacaceae	...	1	...	1	...	...
Cucurbitaceae	2	...	2	...	...	...

Families.	Genera.		Species.		Varieties and Named Forms.	
	Native.	Introd.	Native.	Introd.	Native.	Introd.
Campanulaceae	2	...	3	1	...	1
Lobeliaceae	1	...	6	...	...	...
Compositae	34	22	146	69	33	10

SUMMARY BY DIVISIONS AND CLASSES.

Pteridophyta	25	...	74	...	22	...
Spermatophyta	454	142	1407	461	233	31
Gymnospermae	9	...	13	4	1	...
Angiospermae	445	142	1394	457	232	31
Monocotyledoneae	123	21	495	61	113	3
Dicotyledoneae	322	121	899	396	119	28

SUMMARY BY MINOR GROUPS.

Families	.	.	.	.	134	
Genera						
native	.	.	.	479		
introduced	.	.	.	142		
total	.	.	.	.	621	
Species						
native	.	.	.	1481		
introduced	.	.	.	461		
total	.	.	.	.	1942	
Varieties and Named Forms						
native	.	.	.	255		
introduced	.	.	.	31		
total	.	.	.	.	286	

Whole number of different plants (species, varieties and named forms), not including those listed as fugitives, 2,228.

ORIGIN OF INTRODUCED SPECIES.

	Temperate North America.	Tropical America.	Europe.	Eurasia.	Asia.	Unknown.
Pinaceae	1	...	3	...	...	...
Gramineae	...	...	42	1	1	...
Commelinaceae	1	...	...	...	...	...
Liliaceae	1	...	8	...	3	...
Amaryllidaceae	...	...	3	...	...	...
Iridaceae	...	...	2	...	2	...
Salicaceae	...	...	8	...	1	...
Urticaceae	2	...	3	1	3	...
Polygonaceae	3	...	7	1	3	...
Chenopodiaceae	...	2	7	...	1	...
Amaranthaceae	1	5	...	...	1	...
Nyctaginaceae	3	...	...	...	...	...
Illecebraceae	...	...	1	...	...	...

	Temperate North America.	Tropical America.	Europe.	Eurasia.	Asia.	Unknown.
Aizoaceae	1	...	...	...	...	...
Caryophyllaceae	...	...	21	2	1	...
Portulacaceae	...	...	1	...	...	...
Ranunculaceae	...	...	6	...	...	...
Berberidaceae	1	...	1	...	...	...
Papaveraceae	...	...	3	...	...	...
Fumariaceae	...	...	1	...	...	...
Cruciferae	...	...	24	1	1	...
Capparidaceae	1	...	...	...	...	...
Resedaceae	...	...	1	...	...	...
Crassulaceae	...	...	3	...	...	...
Saxifragaceae	3	...	3	...	...	...
Rosaceae	3	...	13	12	8	2
Leguminosae	5	...	16	3	...	...
Linaceae	...	...	...	...	...	1
Oxalidaceae	...	...	1	...	...	...
Geraniaceae	...	...	1	...	...	...
Rutaceae	1	...	...	...	...	...
Simarubaceae	...	...	...	...	1	...
Euphorbiaceae	2	...	4	...	...	...
Celastraceae	1	...	...	1	1	...
Aceraceae	1	...	1	1	...	...
Sapindaceae	...	...	...	...	1	...
Rhamnaceae	...	...	1	...	...	...
Tiliaceae	...	...	1	...	...	...
Malvaceae	...	...	8	...	2	...
Hypericaceae	1	...	1	...	...	...
Violaceae	...	...	3	...	...	...
Lythraceae	...	...	1	...	...	...
Onagraceae	1	...	...	...	...	...
Araliaceae	1	...	...	...	1	...
Umbelliferae	...	...	10	...	...	...
Primulaceae	...	...	3	1	...	...
Oleaceae	...	...	3	...	...	...
Apocynaceae	...	...	1	...	...	...
Asclepiadaceae	...	...	1	...	...	...
Convolvulaceae	...	2	2	...	1	...
Polemoniaceae	4	...	...	...	...	...
Boraginaceae	...	...	10	...	...	...
Verbenaceae	2	...	...	...	...	...
Labiatae	6	...	25	...	1	...
Solanaceae	2	6	2	...	2	...
Scrophulariaceae	4	...	10	...	...	...
Bignoniaceae	2	...	...	...	...	...
Plantaginaceae	1	...	1	...	...	...

	Temperature.					
	North	Tropical				
	America.	America.	Europe.	Eurasia.	Asia.	Unknown.
Rubiaceae	...	...	4	...	...	...
Caprifoliaceae	2	...	1	...	3	...
Valerianaceae	...	...	1	...	...	...
Dipsacaceae	...	...	1	...	...	...
Campanulaceae	...	...	1	1	...	...
Compositae	20	3	53	...	3	...

**SPECIES, VARIETIES AND NAMED FORMS IN SOME OF THE PRINCIPAL
GENERA.**

	Species.		Varieties and Named Forms.		Total.
	Native.	Introd.	Native.	Introd.	
Potamogeton	27	...	10	...	37
Panicum	40	1	2	...	43
Bromus	5	8	...	...	13
Cyperus	12	...	4	...	16
Eleocharis	14	...	2	...	16
Scirpus	23	...	9	...	32
Carex	111	...	53	...	164
Juncus	18	...	6	...	24
Habenaria	13	...	...	...	13
Salix	13	5	5	...	23
Quercus	12	...	...	...	12
Rumex	3	7	...	...	10
Polygonum	18	7	8	...	33
Chenopodium	4	6	...	2	12
Ranunculus	16	2	2	1	21
Ribes	6	4	...	...	10
Crataegus	18	1	11	...	30
Potentilla	9	2	2	...	13
Rosa	5	7	...	1	13
Rubus	16	3	4	...	23
Prunus	9	6	...	...	15
Desmodium	13	...	...	...	13
Euphorbia	5	6	...	...	11
Hypericum	11	2	...	...	13
Viola	25	3	1	...	29
Mentha	1	9	1	...	11
Veronica	6	5	...	...	11
Galium	11	3	1	...	15
Solidago	27	...	4	...	31
Aster	32	1	19	...	52
Helianthus	6	5	1	...	12
Bidens	10	...	1	...	11

BOTANICAL AUTHORS CITED.

The following list is not entirely complete, but is intended to summarize such information as the Committee were able to gather in the time, and with the resources, at their disposal.

- A. A. Eaton.** Alvah Augustus Eaton, 1865-1908. United States. Student particularly of the *Isoëtaceae* and *Equisetaceae* of North America.
- A. Br.** See Braun.
- Adans.** Michel Adanson, 1727-1806. Author of a work on the families of plants.
- A. DC.** Alphonse Louis Pierre Pyramus De Candolle, 1806-1893. Switzerland. Editor of the *Prodromus* after his father's death, and contributor to it; author of works on botanical geography, etc.
- Ait.** William Aiton, 1731-1793. England. Author of *Hortus Kewensis*.
- Ait. f.** William Townsend Aiton, 1766-1849. England. Director of the Royal Gardens at Kew.
- A. J. Eames.** Arthur Johnson Eames. United States.
- A. J. Grout.** Abel Joel Grout. United States. Student of North American mosses.
- All.** Carlo Allioni, 1725-1804. Italy. Prof. of Botany at Turin.
- Ames.** Oakes Ames. United States. Director of the Botanic Garden, Harvard University. Student of *Orchidaceae*.
- Anders.** Nils Johan Andersson, 1821-1880. Sweden. Prof. of Botany at Stockholm. Author of a monograph of the genus *Salix*, etc.
- Andr.** Henry C. Andrews. England. Botanical artist and engraver; conducted the *Botanists' Repository*, 1799-1811.
- Andrz.** Anton Lukianowicz Andrzejowski, 1784-1868. Russia. Prof. of Botany at Wilna.
- A. Nelson.** Aven Nelson. United States. Prof. of Botany at the State University of Wyoming. Author of articles on Rocky Mountain botany.
- Angstr.** Johan Angstroem. Sweden. Author of a work on mosses of Scandinavia, published 1842.
- Ard.** Pietro Arduino, 1728-1805. Italy.
- Arn.** George Arnold Walker Arnott, 1799-1868. Scotland.
- Aschers., Ascherson.** Paul Friedrich August Ascherson. Germany. Prof. of Botany at the University of Berlin.

- Ashe.** William Willard Ashe. United States. Botanist, North Carolina Geological Survey.
- Aust.** Coe Finch Austin, 1831-1880. United States. Curator of the Herbarium at Columbia University. Student especially of North American mosses.
- Avé-Lallemant.** See Lall.
- Bab.** Charles Cardale Babington. England. Prof. of Botany at Cambridge University. Author of a manual of British botany, published 1843, etc.
- Bailey.** Liberty Hyde Bailey. United States. Director of the College of Agriculture at Cornell University. Author of studies of the genus *Carex* and of many works relating to horticulture.
- Baker.** John Gilbert Baker. England. Formerly Keeper of the Herbarium of the Royal Gardens, Kew.
- Balbis.** Giovanni Battista Balbis, 1765-1831. Italy. Prof. at Turin.
- Ball.** Carleton Roy Ball. United States. Agronomist in the Department of Agriculture.
- Banks.** Joseph Banks, 1743-1820. England. President of the Royal Society. Explorer, and generous patron of science.
- Barneoud.** F. Marius Barneoud. France. Author of a monograph of the *Plantaginaceae*, published 1845.
- Barnh.** John Hendley Barnhart. United States. Librarian, New York Botanical Garden.
- Barratt.** Joseph Barratt, 1707-1882. United States. Student chiefly of willows and sedges.
- Bart., Barton.** William Paul Crillon Barton, 1787-1856. United States. Prof. at the University of Pennsylvania. Author of *Compendium Florae Philadelphicae*, and of a flora of North America.
- Bartlett.** Harley Harris Bartlett. United States.
- B. D. Greene.** Benjamin D. Greene, 1793-1863. United States.
- Beauv.** Ambroise Marie François Joseph Palisot de Beauvois, 1755-1820. France. Author of a great work on grasses.
- Beck.** Lewis Caleb Beck, 1798-1853. United States. Prof. at various colleges. Author of *Botany of the Northern and Middle States*.
- Beeby.** William Hadden Beeby. England.
- Benn.** Arthur Bennett. England.

- Benth.** George Bentham, 1800-1884. England. Author or joint author of many important botanical works.
- Berchtold.** Friedrich, Graf von Berchtold, b. 1780. Bohemia.
- Bergius.** Peter Jonas Bergius, 1730-1790. Sweden.
- Bernh.** Johann Jacob Bernhardi, 1774-1850. Germany. Prof. of Botany at Erfurt.
- Bess.** Wilhelm S. J. G. von Besser, 1784-1842. Austria.
- Betcke.** Ernst Friedrich Betcke. Germany. Author of a work on the genus *Valerianella*, published 1826.
- Beyrich.** Karl Beyrich, d. 1834. Germany.
- Bicknell.** Eugene Pintard Bicknell. United States. Author of many articles on North American plants.
- Bieb.** Friedrich August Marschall von Bieberstein, 1768-1826. Germany and Russia. Author of works on the flora of Southern Russia.
- Bigel.** Jacob Bigelow, 1787-1879. United States. Author of *Florula Bostoniensis*, and of a *Medical Botany*.
- Bisch., Bischoff.** Gottlieb Wilhelm Bischoff, 1797-1854. Germany. Prof. of Botany at Heidelberg.
- Bissell.** Charles Humphrey Bissell. United States.
- Blanchard.** William Henry Blanchard. United States.
- Blume.** Karl Ludwig Blume, 1796-1862. Holland. Director of the Royal Herbarium at Leyden. Author of a great flora of Java.
- Blytt.** Matthias Numsen Blytt, 1789-1862. Norway. Prof. of Botany at Christiania. Author of a flora of Norway.
- Boeckl.** Johann Otto Boeckeler, 1803-1899. Germany. Writer on *Cyperaceae*.
- Boehm.** Georg Rudolf Boehmer, 1723-1803. Germany. Prof. at Wittenberg. (*Boehmeria* Jacq.)
- Boenn.** Clemens Maria Friedrich von Boenninghausen, 1785-1864. Germany.
- Boiss.** Edmond Boissier, 1810-1885. Switzerland. Author of a *Flora Orientalis*, various studies of the genus *Euphorbia*, etc.
- Bonpland.** See HBK.
- Boott.** Francis Boott, 1792-1863. United States and England. Author of a great work on the genus *Carex*. See also W. Boott.
- Borkh.** Moritz Balthasar Borkhausen, 1760-1806. Germany.
- Bosc.** Louis Augustin Guillaume Bosc, 1759-1828. France.
- Bosch.** Roelof Benjamin van den Bosch, 1810-1862. Holland.

Braun. Alexander Carl Heinrich Braun, 1805-1877. Germany. Professor at the University of Berlin. Writer on Cryptogams.

Bray. See U. & B.

Briquet. John Isaac Briquet. Switzerland. Director of the Geneva Botanic Garden.

Britten. James Britten. England. Senior Assistant, Department of Botany, British Museum. Editor, Journal of Botany.

Britton. Nathaniel Lord Britton. United States. Director, New York Botanical Garden. Author of Illustrated Flora of the Northern States and Canada (with Addison Brown), Manual of the Flora of the Northern States and Canada, and numerous botanical papers.

Brown. Addison Brown. United States. See also R. Br.

Browne. See P. Br.

BSP. Nathaniel Lord Britton, E. E. Sterns and Justus Poggenburg. Authors of a Preliminary Catalogue of the Plants of the Vicinity of New York.

Buchenau. Franz Georg Philipp Buchenau, 1831-1906. Germany.

Buckley. Samuel Botsford Buckley, 1809-1884. United States.

Burgess. Edward Sanford Burgess. United States. Prof. of Natural Science, Normal College, New York. Author of studies of the genus *Aster*.

Burm. f. Nickolaus Laurens Burmann, 1734-1793. Holland.

Bush. B. F. Bush. United States.

Candolle. See A. DC., DC.

C. & S. A. von Chamisso and D. F. L. von Schlechtendal. See Cham. and Schlecht.

Carey. John Carey, 1797-1880. England and United States. Lived and collected in the United States, 1830 to 1852; wrote on willows and sedges.

Carr. Élie Abel Carrière, 1818-1896. France. Editor of *Révue Horticole*; author of a monograph of *Coniferae*.

Casp. Robert Caspary, 1818-1887. Germany. Prof. of Botany at Königsberg. Wrote on water plants.

Cass. Alexandre Henri Gabriel, Comte de Cassini, 1781-1832. France.

- Cav.** Antonio José Cavanilles, 1745-1804. Spain. Prof. of Botany at Madrid.
- C. C. Gmel.** Carl Christian Gmelin, 1762-1837. Germany.
- Čelak.** Ladislav Čelakovsky, 1834-1902. Bohemia. Prof. of Botany at Prague.
- Chaix.** Dominique Chaix, 1731-1800. France.
- Cham.** Adalbert von Chamisso, 1781-1838. Germany. Poet and naturalist.
- Chapm.** Alvan Wentworth Chapman, 1809-1899. United States. Author of a standard flora of the Southern States.
- Chase.** (Mrs.) Agnes Chase. United States. Assistant in systematic agrostology, U. S. Department of Agriculture.
- Chatelain.** Jean Jacques Chatelain. Author of a work on the genus *Corallorrhiza*, published 1760.
- Clarke.** Charles Baron Clarke, 1832-1906. England. Student principally of the *Cyperaceae*.
- Clayt.** John Clayton, 1685-1773. Physician and collector in Virginia, and correspondent of Gronovius, whose *Flora Virginica* was based on Clayton's collections and notes. (*Claytonia* L.)
- Clute.** Willard Nelson Clute. United States. Student of North American ferns and fern-allies.
- Cosson.** Ernest Cosson, 1819-1889. France.
- Coulter.** John Merle Coulter. United States. Prof. of Botany at the University of Chicago. Author of a manual of Rocky Mountain Botany, botanical text-books, etc. See also T. Coulter.
- Courtois.** Richard Courtois, 1806-1835. Belgium. Prof. at Liège.
- Coville.** Frederick Vernon Coville. United States. Botanist, U. S. Department of Agriculture. Curator, U. S. National Herbarium. Author of many botanical papers.
- Crantz.** Heinrich Johann Nepomuk Crantz, 1722-1799. Austria. Prof. at Vienna.
- Curtis.** William Curtis, 1746-1799. England. Founder of Curtis's Botanical Magazine. See also M. A. Curtis.
- C. Wright.** Charles Wright, 1811-1886. United States. Made important collections in the southwestern U. S. and in Cuba.
- Cyrill.** Domenico Cyrillo, 1730-1799. Italy. Prof. at Naples.
- Darby.** John Darby, 1804-1877. United States. Author of a Botany of the Southern States.

- Darl.** William Darlington, 1782-1863. United States. Author of *Flora Cestrica*, a local flora of the vicinity of West Chester, Penn.
- Davenp.** George Edward Davenport, 1833-1907. United States. Student of American ferns.
- DC.** Augustin Pyramus De Candolle, 1778-1841. France and Switzerland. Projector of the *Prodromus*, writer of its earlier volumes and of other important botanical work. See also A. DC.
- D. C. Eaton.** Daniel Cady Eaton, 1834-1895. United States. Prof. of Botany at Yale University. Author of *Ferns of North America*, etc.
- Dcne.** Joseph Decaisne, 1809-1882. France. Prof. at the Jardin des Plantes, Paris.
- D. Don.** David Don, 1800-1841. England. Prof. at King's College, London.
- De Candolle.** See A. DC., DC.
- Desf.** René Louiche Desfontaines, 1750-1833. France. Prof. at the Jardin des Plantes, Paris.
- Desr.** Desrousseaux.
- Desv.** Augustin Nicaise Desvaux, 1784-1856. France. Prof. of Botany at Angers.
- Dewey.** Chester Dewey, 1784-1867. United States. Prof. at Rochester University. Student of American *Carices*.
- Dicks.** James Dickson, 1738-1822. Scotland. (*Dicksonia* L'Her.)
- Dietr.** Friedrich Gottlieb Dietrich, 1768-1850. Germany. Director of the Botanic Garden at Eisenach.
- Don.** See D. Don, G. Don.
- Donn.** James Donn, 1758-1813. England. Author of *Hortus Cantabrigiensis*.
- Dougl.** David Douglas, 1799-1834. Scotland. Collected much in northwestern North America.
- Druce.** George Claridge Druce. England. Author of various works on the British flora.
- Drude.** Oskar Drude. Germany. Prof. at Dresden. Author of works on plant geography, etc.
- Duby.** Jean Étienne Duby, b. 1798. Switzerland. Author of studies in the *Primulaceae*.
- Duchesne.** Antoine Nicolas Duchesne, 1747-1827. France.
- Dudley.** William Russell Dudley. United States. Prof. of Botany at Leland Stanford, Jr., University.
- .

- Dufr.** Pierre Dufresne, 1786-1836. France. Author of a work on the *Valerianaceae*.
- Dulac.** J. Dulac. France. Author of a Flora du Département des Hautes Pyrénées, 1867.
- Dumont.** Jules Sébastien César Dumont d'Urville, 1790-1842. France.
- Dumort.** Barthélemy Charles Dumortier, 1797-1878. Belgium.
- Dunal.** Michel Félix Dunal, 1789-1856. France. Prof. of Botany at Montpellier. Author of a monograph of *Solanum* and allied genera, etc.
- Dur.** Michel Charles Durieu de Maisonneuve, 1796-1878. France. Director of the Botanic Garden at Bordeaux.
- Durand.** Elias Durand, 1794-1873. United States. Collector of North American plants. See also Th. Durand.
- DuRoi.** Johann Philipp DuRoi, 1741-1785. Germany. Author of a work on the trees of North America.
- Eames.** Edwin Hubert Eames. United States. See also A. J. Eames.
- Eaton.** See A. A. Eaton, D. C. Eaton, H. H. Eaton.
- Ebermaier.** Karl Heinrich Ebermaier, 1802-1870. Germany.
- Eddy.** Caspar Wistar Eddy. United States. Author of a local flora, *Plantae Plandomenses*, published 1808.
- Eggleston.** Willard Webster Eggleston. United States. Collector; student of *Crataegus*.
- E. Hitchc.** Edward Hitchcock, 1793-1864. United States. Prof. at Amherst College. Author of a Catalogue of Plants in the Vicinity of Amherst College, etc.
- Ehrh.** Friedrich Ehrhart, 1742-1795. Germany.
- Ell.** Stephen Elliott, 1771-1830. United States. Author of Sketch of the Botany of South Carolina and Georgia.
- Ellis.** John Ellis, 1711-1776. England. (*Ellisia* L.)
- Endlicher.** Stephan Friedrich Ladislaus Endlicher, 1804-1849. Prof. at Vienna and Director of the Botanic Garden. Author of a *Genera Plantarum*.
- Engelm.** George Engelmann, 1809-1884. United States. Studied and monographed more or less completely several difficult genera of North American plants.
- E. S. Miller.** Elihu Sandford Miller. United States.
- Fabric.** Philipp Konrad Fabricius, 1714-1774. Germany. Prof. at Helmstadt.
- Farwell.** Oliver Atkins Farwell. United States.

- Fée.** Antoine Laurent Apollinaire Fée, 1789-1874. France. Prof. of Botany at Strassburg. Writer on ferns.
- Fenzl.** Eduard Fenzl, 1808-1879. Austria. Curator of the Botanical Museum at Vienna.
- Fernald.** Merritt Lyndon Fernald. United States. Assistant Prof. of Botany, Harvard University. Author of many papers and monographs dealing with the North American and Mexican floras.
- Fisch.** Friedrich Ernst Ludwig von Fischer, 1782-1854. Russia. Director of the Botanic Garden at St. Petersburg.
- Flügge.** Johann Flügge, 1775-1816. Germany.
- Focke.** Wilhelm Olbers Focke. Germany.
- Forbes.** John Forbes, 1773-1861. England. Gardener at Woburn Abbey. Author of *Hortus Woburnensis*.
- Forskål.** Pehr Forskål, 1736-1768. Sweden. Collected in Egypt and Arabia.
- Foucaud.** Julien Foucaud, 1847-1904. France.
- Fourn.** Pierre Nicolas Eugène Fournier, 1834-1884. France. Author of works on Mexican ferns and grasses.
- Fourr.** Jules Fourreau. France.
- Fries.** Elias Magnus Fries, 1794-1878. Sweden. Prof. at Upsala. Author of many works on systematic botany, chiefly of the lower Cryptogams.
- Fritsch.** Karl Fritsch. Austria. Prof. of Botany at the University of Graz.
- Froel.** Joseph Aloys Froelich, 1766-1841. Germany. Author of a monograph of the genus *Gentiana*, etc.
- F. Schultz.** Friedrich Wilhelm Schultz, b. 1804. Germany.
- Gaertn.** Joseph Gaertner, 1732-1791. Germany.
- Garcke.** Friedrich August Garcke, 1819-1904. Germany. Prof. at Berlin. Author of a standard manual of the German flora.
- Gaud.** Charles Gaudichaud-Beaupré, 1789-1864. France.
- Gaudin.** Jean François Gottlieb Philippe Gaudin, 1766-1833. Switzerland. Author of a *Flora Helvetica*.
- Gay.** See J. Gay.
- G. Don.** George Don, 1798-1856. England.
- Germain.** Ernest Germain de Saint-Pierre. France.
- Gilbert.** Benjamin Davis Gilbert, 1835-1907. United States. Student of American ferns.
- Gilib.** Jean Emmanuel Gilibert, 1741-1814. Prof. at Wilna, Russia, and at Lyons, France.

- Gill.** John Gillies, d. before 1837. Lived and collected in South America.
- Gloxin.** Benjamin Peter Gloxin. France. Published *Observationes Botanicae*, 1785.
- Gmel.** Samuel Gottlieb Gmelin, 1743-1774. Russia. See also C. C. Gmel., J. F. Gmel.
- Godr.** Dominique Alexandre Godron, 1807-1880. France. Prof. at Nancy. Joint author of a flora of France.
- Goldie.** John Goldie, 1793-1886. Scotland and Canada. Traveled and collected in eastern North America in the early 19th century.
- Good.** Samuel Goodenough, 1743-1827. England.
- Grab.** Heinrich Emmanuel Grabowski, 1792-1842. Germany.
- Graebner.** Paul Graebner. Germany. Curator of the Royal Botanic Garden at Dahlem.
- Graves.** Charles Burr Graves. United States.
- Gray.** Asa Gray, 1810-1888. United States. The most distinguished of American botanists; for many years Prof. of Natural History at Harvard University. Author of the well-known *Manual of the Botany of the Northeastern States*, *Synoptical Flora of North America*, etc. See also S. F. Gray.
- Greene.** Edward Lee Greene. United States. Former Prof. of Botany at the University of California and at the Catholic University of America, Georgetown. Author of many articles and monographs dealing with North American plants. See also B. D. Greene.
- Greenman.** Jesse More Greenman. United States. Field Museum of Natural History, Chicago.
- Gren.** Charles Grenier, 1808-1875. France. Prof. at Besançon. Joint author (with Godron) of a flora of France.
- Grev.** Robert Kaye Greville, 1794-1866. Scotland. Prof. at Edinburgh. Author or joint author of several works, mostly on cryptogamic plants.
- Griseb.** Heinrich Rudolf August Grisebach, 1814-1879. Germany. Prof. of Botany at Göttingen. Author of a monograph of the *Gentianaceae*, *Flora of the British West Indies*, etc.
- Gronov.** Jan Fredrik Gronovius, 1690-1762. Holland. Author of a *Flora Virginica*; a distinguished botanist in his time.
- Grout.** See A. J. Grout.

- G. S. Miller.** Gerrit Smith Miller, Jr. United States. Assistant Curator, U. S. National Museum.
- Guss.** Giovanni Gussone, 1787-1866. Italy. Prof. of Botany at Naples.
- Haberer.** Joseph V. Haberer. United States.
- Hack.** Eduard Hackel. Austria. Author of works on grasses.
- Haller f.** Gottlieb Emmanuel von Haller, 1730-1786. Switzerland.
- Harper.** Roland MacMillan Harper. United States.
- Haussk.** Carl Haussknecht.
- Haw.** Adrian Hardy Haworth, 1772-1833. England. Author of *Synopsis Plantarum Succulentarum*.
- Hayne.** Friedrich Gottlieb Hayne, 1763-1832. Germany. Prof. at Berlin.
- HBK.** Friedrich Wilhelm Heinrich Alexander von Humboldt, 1796-1859. Germany. Aimé Jacques Alexandre Bonpland, 1773-1858. France. Karl Sigismund Kunth, q. v. Joint authors of a great work on plants of the New World.
- Hegelm.** Christoph Friedrich Hegelmaier, 1833-1906. Germany. Prof. at Tübingen. Author of a monograph of the genus *Callitriche*, etc.
- Heller.** Amos Arthur Heller. United States. Collector; author of a Catalogue of North American Plants, etc.
- H. H. Eaton.** Hezekiah Hulbert Eaton, 1809-1832. United States.
- Hill.** John Hill, 1716-1775. England.
- Hitchc.** Albert Spear Hitchcock. United States. Systematic Agrostologist, U. S. Department of Agriculture. See also E. Hitchc.
- Hochst.** Christian Friedrich Hochstetter, 1787-1860. Germany.
- Hoffm.** Georg Franz Hoffman, 1761-1826. Germany and Russia. Prof. of Botany at Göttingen and Moscow.
- Hoffmg.** Johann Centurius, Graf von Hoffmanssegg, 1766-1849. Germany.
- Hollick.** Charles Arthur Hollick. United States. Author of papers on the botany and geology of the vicinity of New York.
- Hook.** William Jackson Hooker, 1785-1865. England. Director of the Royal Garden at Kew. Author of *Species Filicum*, and of much important botanical work.

- Hook. f.** Joseph Dalton Hooker. England. Former Director of the Royal Garden and Museum at Kew. Joint author (with Bentham) of an authoritative work on the genera of plants. Author of *Flora of British India*, etc.
- Horkel.** Johann Horkel, 1769-1846. Germany. Prof. at the University of Berlin.
- Hornem.** Jens Wilken Hornemann, 1770-1841. Denmark. Prof. of Botany at Copenhagen.
- Host.** Nicolaus Thomas Host, 1761-1834. Austria. Wrote on Austrian grasses.
- Houba.** J. Houba. Belgium(?). Author of a work on oaks, published 1887.
- House.** Homer Doliver House. United States.
- Howell.** Thomas Howell. United States. Author of a flora of the Northwestern States.
- Huds.** William Hudson, 1730-1793. England. Author of a *Flora Anglica*. (*Hudsonia* L.)
- Hull.** John Hull, 1761-1843. England. Author of a British Flora.
- Humboldt.** See HBK.
- Ives.** Eli Ives, 1779-1861. United States. Prof. at Yale College.
- Jackson.** Benjamin Daydon Jackson. England. Curator of the Herbarium of the Linnean Society, London. Joint author of the *Index Kewensis*.
- Jacq.** Nicolaus Joseph Jacquin, 1727-1817. Austria. Collected in tropical America. Author of several important botanical works.
- J. E. Smith.** See Sm.
- J. F. Gmel.** Johann Friedrich Gmelin, 1748-1804. Germany. Prof. at Tübingen and Göttingen.
- J. Gay.** Jacques Gay, 1786-1864. France.
- J. G. Smith.** Jared Gage Smith. United States. In charge of U. S. Agricultural Experiment Station, Hawaii.
- Jord.** Alexis Jordan. France. Joint author (with Fourreau) of *Breviarium Plantarum Novarum*, 1866.
- Juss.** Antoine Laurent Jussieu, 1748-1836. France. Prof. at the Jardin des Plantes, Paris. The first to attempt to define the natural families of plants, in his *Genera Plantarum*, 1774.
- Kalm.** Pehr Kalm, 1715-1779. Finland. Traveled and collected in America. (*Kalmia* L.)

- Karst.** Hermann Gustav Karl Wilhelm Karsten, 1817-1908. Austria and Germany. Prof. at Vienna.
- Ker.** John Bellenden Ker, 1765(?) - 1871. England.
- Kitaibel.** See W. & K.
- K. Koch.** See Koch.
- Knight.** Ora Willis Knight. United States.
- Koch.** Karl Heinrich Emil Koch, 1809-1879. Germany. Prof. at Berlin.
- Koehne.** Bernhard Adalbert Emil Koehne. Germany. Prof. at Berlin. Dendrologist; author of a monograph of the *Lythraceae* of the United States.
- Koeler.** Georg Ludwig Koeler, d. 1807. Germany. Prof. at Mainz.
- Kuhn.** Friedrich Adalbert Maximilian Kuhn, 1842-1894. Germany. Writer on ferns.
- Kunth.** Karl Sigismund Kunth, 1788-1850. Germany. Prof. at Berlin. Author of *Enumeratio Plantarum*, a work designed to supplement the *Prodromus*, *Revisio Graminum*, etc. See also HBK.
- Kuntze.** Karl Ernst Otto Kuntze, 1843-1907. Germany. Author of *Revisio Generum Plantarum*, a work chiefly nomenclatorial.
- L.** Carolus Linnaeus (Carl von Linné), 1707-1778. Sweden. Prof. of Botany at Upsala. The "Father of Botany." Inventor of the binomial system of nomenclature. His *Species Plantarum* is accepted as the basis of modern descriptive botany. (*Linnaea* Gronov.)
- Laestad.** Lars Levi Laestadius, b. 1800. Lapland.
- Lag.** Mariano Lagasca, 1776-1839. Spain. Wrote on Mexican and Spanish plants.
- Lall.** Julius Leopold Eduard Avé-Lallemant, 1803-1867. Germany.
- Lam.** Jean Baptiste Antoine Pierre Monnet de Lamarck, 1744-1829. France. Distinguished naturalist and philosopher; author of a theory of organic evolution which anticipated Darwin's.
- Lamotte.** Martial Lamotte. France.
- Lamson-Scribner.** See Scribn.
- Lange.** Johan Martin Christian Lange, 1818-1898. Denmark. Prof. of Botany at Copenhagen.
- Le Conte.** John Eaton Le Conte, 1784-1860. United States. Author of papers on various genera of North American plants.

- Lecoq.** Henri Lecoq, 1802-1871. France. Prof. at Clermont-Ferrand.
- Ledeb.** Karl Friedrich von Ledebour, 1785-1851. Russia. Prof. at Dorpat. Author of *Flora Altaica*, *Flora Rossica*.
- Leers.** Johann Daniel Leers, 1727-1774. Germany. (*Leersia* Sw.)
- Leggett.** William Henry Leggett, 1816-1882. United States. Founder of the Bulletin of the Torrey Botanical Club. Studied the genus *Lechea*.
- Lehm.** Johann Georg Christian Lehmann, 1792-1860. Germany. Prof. and Director of the Botanic Garden at Hamburg.
- Lejeune.** Alexander Ludwig Simon Lejeune, 1779-1858. Belgium. Joint author (with Courtois) of *Compendium Florae Belgicae*.
- Lestib.** François Joseph Lestiboudois, d. 1815. France. Prof. of Botany at Lille.
- Leyss.** Friedrich Wilhelm von Leysser, 1731-1815. Germany.
- L. f.** Carl von Linné, the son, 1741-1783. Sweden. Prof. at Upsala.
- L'Her.** Charles Louis L'Heritier de Brutelle, 1746-1800. France.
- Lightf.** John Lightfoot, 1735-1788. England. Author of a flora of Scotland.
- Lindl.** John Lindley, 1799-1865. England. Prof. of Botany at London. Distinguished as a horticulturist and author of many botanical works.
- Link.** Heinrich Friedrich Link, 1767-1851. Germany. Prof. of Botany at Berlin.
- Linnaeus, Linné.** See L., L. f.
- Lodd.** Conrad Loddiges. England. Nurseryman near London; conducted Loddiges' Botanical Cabinet, 1817-1833.
- Loisel.** Jean Louis Auguste Loiseleur-Deslongchamps, 1774-1849. France.
- Loud.** John Claudius Loudon, 1783-1843. England. Author of an encyclopedia of plants native and cultivated in Great Britain, *Arboretum et Fruticetum Britannicum*, etc.
- Ludwig.** Christian Gottlieb Ludwig, 1709-1773. Germany. (*Ludvigia* L.)
- Mackenzie.** Kenneth Kent Mackenzie. United States.
- MacMill.** Conway MacMillan. United States. Author of works on Minnesota plants.

- M. A. Curtis.** Moses Ashley Curtis, 1808-1873. United States. Author of a flora of North Carolina and of important studies of North American fungi.
- Magnus.** Paul Magnus.
- Marchal.** Élie Marchal. Belgium.
- Marsh.** Humphrey Marshall, 1722-1801. United States. Author of a work on American trees and shrubs.
- Martens.** Martin Martens, 1797-1863. Belgium. Prof. of Botany at Louvain.
- Martius.** Karl Friedrich Philipp von Martius, 1794-1868. Germany. Prof. at Munich.
- Maxim.** Karl Johann Maximowicz, 1827-1891. Russia. Wrote much on Asiatic plants.
- Maxon.** William Ralph Maxon. United States. Assistant Curator, U. S. National Museum. Writer on ferns.
- Medic.** Friedrich Casimir Medicus, 1736-1808. Germany. Director of the Botanic Garden at Mannheim.
- Meisn.** Karl Friedrich Meisner, 1800-1874. Switzerland. Prof. of Botany at Basle.
- Mérat.** François Victor Méral, 1780-1851. France.
- Merr.** Elmer Drew Merrill. United States. Government Botanist in the Philippine Islands.
- Mert.** Karl Heinrich Mertens, 1796-1830. Russia.
- Mey.** Ernst Heinrich Friedrich Meyer, 1791-1858. Germany. Prof. of Botany at Königsberg.
- Micheli.** See M. Micheli.
- Michx.** André Michaux, 1746-1802. France, but carried on much botanical work in North America.
- Michx. f.** François André Michaux, 1770-1855. France and United States. Son of the preceding. Author of a work on the trees of North America.
- Milde.** Julius Milde, 1824-1871. Germany. Author of works on mosses and pteridophytes.
- Mill.** Philip Miller, 1691-1771. England. Author of a celebrated Dictionary of Gardening.
- Miller.** See E. S. Miller, G. S. Miller, Mill.
- Millsp.** Charles Frederic Millspaugh. Curator, Department of Botany, Field Museum of Natural History, Chicago. Author of a flora of West Virginia and of numerous articles dealing chiefly with the plants of Mexico and the West Indies.
- M. Micheli.** Marco Micheli, 1844-1902. Switzerland.

- Moench.** Konrad Moench, 1744-1805. Germany. Prof. at Marburg.
- Mohr.** Carl Theodor Mohr, 1824-1901. United States. Botanist, Geological Survey of Alabama. Author of *Plant Life of Alabama*, etc.
- Moore.** Thomas Moore, 1821-1887. England. Curator of the Chelsea Botanic Garden. Author of an *Index Filicum*, etc. See also Pease & Moore.
- Moq.** Christian Horace Bénédict Alfred Moquin-Tandon, 1804-1863. France.
- Morong.** Thomas Morong, 1827-1894. United States. Curator of the Herbarium at Columbia University. Collected in Paraguay. Published much on *Najadaceae*.
- Muell. Arg.** Johann Mueller of Aargau, 1829-1896. Switzerland. Director of the Geneva Botanic Garden and Curator of the Delessert Herbarium.
- Muench.** Otto, Freiherr von Muenchhausen, 1716-1774. Germany.
- Muhl.** Gotthilf Henry Ernest Muhlenberg, 1756-1817. United States. Correspondent of many European botanists. Author of a Catalogue of North American Plants, Description of North American Grasses, etc. (*Muhlenbergia* Schreb.)
- Müller.** See Muell. Arg., O. F. Müller.
- Murr.** Johann Andreas Murray, 1740-1791. Germany. Prof. at Göttingen.
- Mutis.** José Celestino Mutis, 1732-1808. Spain.
- Nash.** George Valentine Nash. United States. Curator of Plantations, New York Botanical Garden. Writer on North American grasses.
- Neck.** Noel Joseph de Necker, 1729-1793. Germany.
- Nees.** Christian Gottfried Daniel Nees von Esenbeck, 1776-1858. Germany. Prof. of Botany at Breslau.
- Nelson.** See A. Nelson.
- Nutt.** Thomas Nuttall, 1786-1859. United States and England. Explorer, botanist and ornithologist. Director of the Harvard Botanic Garden. Author of *Genera of North American Plants*, *Forest Trees of the United States*.
- Nym.** Carl Fredrik Nyman, 1820-1893. Sweden.
- Oakes.** William Oakes, 1799-1848. United States. Collector and student of the New England flora. (*Oakesia* Wats.)
- Oeder.** Georg Christian Oeder, 1728-1791. Germany. Author of works on the plants of Denmark and Norway.

- O. F. Müller.** Otto Friedrich Müller, 1730-1784. Denmark.
- Olney.** Stephen T. Olney, 1812-1878. United States. Author of a Catalogue of Rhode Island Plants; student of *Carices*.
- Otto.** Friedrich Otto, 1782-1856. Germany.
- Paine.** John Alsop Paine. United States. Author of Plants of Oneida County [New York] and Vicinity.
- Parl.** Filippo Parlatore, 1816-1877. Italy. Prof. of Botany at Florence.
- Pavon.** José Pavon, fl. about 1800. Spain.
- Pax.** Ferdinand Pax. Germany. Prof. of Botany at the University of Breslau.
- P. Br.** Patrick Browne, 1720-1790. Ireland. Author of Civil and Natural History of Jamaica.
- Pease & Moore.** Arthur Stanley Pease and Albert Hanford Moore. United States.
- Peck.** Charles Horton Peck. United States. State Botanist of New York. Author of many botanical reports, dealing chiefly with fungi.
- Pers.** Christiaan Hendrik Persoon, 1755-1837. Germany, etc. Author of Synopsis Plantarum and several works on fungi.
- Peter.** Robert Peter, b. 1805. United States. Geologist and botanist.
- Philippi.** Rudolph Amandus Philippi, 1808-1904. Chile. Director of the Museum at Santiago.
- Piper.** Charles Vancouver Piper. United States. Agrostologist, U. S. Department of Agriculture. Author of a flora of the State of Washington.
- Planch.** Jules Émile Planchon, 1823-1888. France. Prof. at Montpellier.
- Poggenburg.** See BSP.
- Poir.** Jean Louis Marie Poiret, 1755-1834. France.
- Poll.** Johann Adam Pollich, 1740-1780. Germany.
- Pollard.** Charles Louis Pollard. United States. Author of many botanical articles, especially on the genus *Viola*.
- Pomel.** Nicola-Auguste Pomel, 1821-1898. France.
- Porter.** Thomas Conrad Porter, 1822-1901. United States. Prof. of Natural Sciences at Lafayette College. Author of Botany of Pennsylvania, etc.
- Prantl.** Karl Anton Eugen Prantl, 1849-1893. Germany. Prof. at Breslau.
- Presl.** Karel Boriwog Presl, 1794-1852. Bohemia. Prof. at Prague.

- Prince.** William Robert Prince, 1795-1869. United States. Horticulturist.
- Pursh.** Frederick Traugott Pursh, 1774-1820. Traveled for 12 years in the United States. Author of *Flora Americae Septentrionalis*.
- Raf.** Constantino Samuel Rafinesque-Schmaltz, 1784-1842. Prof. of Natural History at Transylvania University, Kentucky. A keen, but erratic botanist.
- Raimann.** Rudolf Raimann. Austria. Prof. at Vienna.
- Rand.** Edward Lothrop Rand. United States.
- R. Br.** Robert Brown, 1773-1858. England. A distinguished botanist, author of many important works.
- Redfield.** John Howard Redfield, 1815-1895. United States. Joint author (with Rand) of a flora of Mt. Desert.
- Regel.** Eduard August von Regel, 1815-1892. Russia. Director of the Botanic Garden at St. Petersburg.
- Rehder.** Alfred Rehder. United States. Assistant at the Arnold Arboretum, Harvard University.
- Reichard.** Johann Jakob Reichard, 1743-1782. Germany.
- Reichenb.** Heinrich Gottlieb Ludwig Reichenbach, 1793-1879. Germany. Prof. at Dresden.
- Rendle.** Alfred Barton Rendle. England. Keeper, Department of Botany, British Museum.
- Retz.** Anders Johan Retzius, 1742-1821. Sweden. Prof. at Lund.
- Richard.** Louis Claude Marie Richard, 1754-1821. France.
- Richards.** John Richardson, 1787-1865. England. Surgeon and naturalist with Sir John Franklin's earlier expeditions. Wrote a botanical appendix to Franklin's narrative.
- Ricker.** Percy Leroy Ricker. United States. Scientific Assistant in Taxonomy, U. S. Dept. of Agriculture.
- Riddell.** John Leonard Riddell, 1807-1867. United States. Prof. at the University of Louisiana. Author of *Synopsis of the Flora of the Western States*, *Plants of Ohio*, etc.
- Ries.** Heinrich Ries. United States. Prof. at Cornell University.
- Robbins.** James Watson Robbins, 1801-1879. United States. Collected in New England, the Lake region, Virginia and Maryland. Student of *Potamogeton*.
- Robinson.** Benjamin Lincoln Robinson. United States. Prof. of Systematic Botany and Curator of the Gray Herbarium, Harvard University. Author of many papers on the plants of North America and Mexico, a flora of the Galapagos Islands, etc.

- Robson.** Stephen Robson. England. Author of a British flora, published 1777.
- Roem.** Johann Jacob Roemer, 1763-1819. Switzerland. Prof. at Zürich.
- Rostk.** Friedrich Wilhelm Gottlieb Rostkovius, 1770-1848. Germany.
- Roth.** Albrecht Wilhelm Roth, 1757-1834. Germany.
- Rottb.** Christian Fries Rottboell, 1727-1797. Denmark. Prof. of Botany at Copenhagen.
- Rouy.** Georges-C.-Ch. Rouy. France.
- Roxb.** William Roxburgh, 1759-1815. India. Director of the Botanic Garden at Calcutta. Wrote on plants of India.
- Rudge.** Edward Rudge, 1763-1846. England.
- Ruiz.** Hipolito Ruiz, 1754-1815. Spain. Joint author (with Pavon) of a flora of Peru and Chile.
- Rupr., Ruprecht.** Franz J. Ruprecht, 1814-1870. Russia. Curator of the Herbarium of the Imperial Academy of Sciences, St. Petersburg.
- Rusby.** Henry Hurd Rusby. United States. Prof., Department of Pharmacy, Columbia University.
- Rydb.** Per Axel Rydberg. United States. Curator, New York Botanical Garden. Author of several monographs, floras of Montana and Colorado, etc.
- Salisb.** Richard Anthony Salisbury, 1761-1829. England.
- Sarg.** Charles Sprague Sargent. United States. Prof. of Arboriculture and Director of the Arnold Arboretum, Harvard University. Author of *Silva of North America*, etc.
- Sartwell.** Henry Parker Sartwell, 1792-1867. United States. Student of *Carices*.
- Schk.** Christian Schkuhr, 1741-1811. Germany. Author of a work on sedges.
- Schlecht.** Diedrich Franz Leonhard von Schlechtendal, 1794-1866. Germany. Prof. at Halle.
- Schleich.** J. C. Schleicher. Author of a flora of Switzerland, 1800.
- Schleid.** Matthias Jacob Schleiden, 1804-1881. Germany.
- Schmidt.** Wilhelm Ludwig Ewald Schmidt, 1804-1843. Germany.
- Schneider.** Camillo Karl Schneider. Austria.
- Schott.** Heinrich Wilhelm Schott, 1794-1865. Austria. Director of the Imperial Garden at Schönbrunn. Author of a monograph of the *Araceae*, etc.

- Schrad.** Heinrich Adolph Schrader, 1767-1836. Germany. Prof. of Botany at Göttingen.
- Schrank.** Franz von Paula Schrank, 1747-1835. Germany. Prof. of Botany at Munich.
- Schreb.** Johann Daniel Christian von Schreber, 1739-1810. Germany.
- Schult., Schultes.** Joseph August Schultes, 1773-1831. Germany. Prof. at Landeshut.
- Schultz.** See F. Schultz.
- Schum.** Christian Friedrich Schumacher, 1757-1830. Denmark.
- Schur.** Philipp Johann Ferdinand Schur, b. 1799. Austria.
- Schwein.** Lewis David von Schweinitz, 1780-1834. United States. Student of fungi, in which department his work is of much importance, and author of monographs of *Viola* and the North American species of *Carex*.
- Scop.** Johann Anton Scopoli, 1723-1788. Italy. Prof. at Pavia.
- Scribn.** Frank Lamson-Scribner. United States. Author of many articles on grasses.
- Ser.** Nicolas Charles Seringe, 1776-1858. France. Prof. at Lyons.
- S. F. Gray.** Samuel Frederick Gray, fl. 1780-1836. England.
- Shear.** Cornelius Lott Shear. United States. Pathologist, U. S. Department of Agriculture.
- Short.** Charles Wilkins Short, 1794-1863. United States. Joint author (with Peter) of Plants of Kentucky.
- Shuttlw.** Robert Shuttleworth, d. 1874. England and Switzerland.
- Sibth.** John Sibthorp, 1758-1796. England. Author of a flora of Greece.
- Sieb.** Philipp Franz von Siebold, 1796-1866. Germany.
- Sims.** John Sims, 1792-1838. England. For many years editor of Curtis' Botanical Magazine.
- Sm., Smith.** James Edward Smith, 1759-1828. England. See also J. G. Smith.
- Small.** John Kunkel Small. United States. Curator of the Museums, New York Botanical Garden. Author of a flora of the southeastern United States, etc.
- Solms.** Herman, Graf zu Solms-Laubach. Germany. Former Prof. at the University of Strassburg.
- Sonder.** Otto Wilhelm Sonder, 1812-1888. Germany.
- Spach.** Eduard Spach, 1801-1879. France.

- Spreng.** Kurt Polycarp Joachim Sprengel, 1766-1833. Germany. Prof. of Botany at Halle.
- Spring.** Anton François Spring, 1814-1872. Belgium. Prof. at Liège. Author of a monograph of the *Lycopodiaceae*.
- Sterns.** See BSP.
- Steud.** Ernst Gottlieb Steudel, 1783-1856. Germany.
- Stokes.** Jonathan Stokes, 1755-1831. England.
- Sudworth.** George Bishop Sudworth. United States. Chief of Dendrology, Forest Service, U. S. Dept. of Agriculture.
- Sw.** Olaf Swartz, 1760-1818. Sweden. Prof. at Stockholm. Author of a flora of the West Indies, *Synopsis Filicum*, etc.
- Sweet.** Robert Sweet, 1783-1835. England.
- Taubert.** Paul Hermann Wilhelm Taubert, 1862-1897. Germany.
- Tausch.** Ignaz Friedrich Tausch, b. 1848. Bohemia.
- T. Coulter.** Thomas Coulter, d. 1843. Ireland. Published a monograph of *Dipsacaceae*.
- Tenney.** Sanborn Tenney, 1827-1877. United States. Prof. at Vassar and Williams Colleges.
- Tenore.** Michele Tenore, 1780-1861. Italy. Prof. of Botany at Naples.
- Th. Durand.** Theophile Durand. Belgium. Director of the Brussels Botanic Garden.
- Thuill., Thuillier.** Jean Louis Thuillier, 1757-1822. France.
- Thunb.** Carl Peter Thunberg, 1743-1822. Sweden. Prof. of Botany at Upsala. Author of a *Flora Japonica*, etc.
- Thurb.** George Thurber, 1821-1890. United States. Botanist of the Mexican Boundary Commission. Student of Grasses.
- Todaro.** Agostino Todaro, 1818-1892. Italy. Director of the Botanic Garden at Palermo.
- Torr.** John Torrey, 1796-1873. United States. Botanist and chemist. Author of a flora of New York, a monograph of the North American *Cyperaceae*, etc. Joint author (with Gray) of a flora of North America.
- Tratt.** Leopold Trattinick, 1764-1849. Austria. Curator at the Herbarium in Vienna.
- Trev.** Christian Ludolf Treviranus, 1779-1864. Germany. Prof. of Botany at Bonn.
- Trevisan.** Vittore, Conte Trevisan. b. 1818. Italy.
- Trin.** Karl Bernhard Trinius, 1778-1844. Russia. Writer on grasses.

- Tuckerm.** Edward Tuckerman, 1817-1886. United States. Prof. of Botany at Amherst College. Author of papers on *Carex* and *Potamogeton*, a catalogue of plants of the vicinity of Amherst College, works on lichens, etc.
- U. & B.** Edwin B. Uline and William L. Bray. United States. Authors of a monograph of North American *Amaranthaceae*.
- Underw.** Lucien Marcus Underwood, 1853-1907. United States. Prof. at Columbia University. Author of *Our Native Ferns*, and articles on ferns and *Hepaticae*.
- Vahl.** Martin Vahl, 1749-1804. Denmark. Prof. of Botany at Copenhagen.
- Vail.** (Miss) Anna Murray Vail. United States.
- Vasey.** George Vasey, 1822-1893. United States. Botanist, U. S. Dept. of Agriculture. Wrote on grasses.
- Vent.** Étienne Pierre Ventenat, 1757-1808. France.
- Vill.** Dominique Villars, 1745-1814. France.
- Wahlenb.** Georg Wahlenberg, 1781-1851. Sweden. Prof. at Upsala.
- Wallr.** Karl Friedrich Wilhelm Wallroth, 1792-1857. Germany.
- Walp.** Wilhelm Gerhard Walpers, 1816-1853. Germany.
- Walt.** Thomas Walter, d. 1788. United States. Author of *Flora Caroliniana*.
- W. & K.** Franz Adam, Graf von Waldstein, 1759-1823, and Paul Kitaibel, 1757-1817. Austria. Authors of a work on the plants of Hungary.
- Wang.** Friedrich Adam Julius von Wangenheim, 1747-1800. Germany. Author of works on North American trees and shrubs.
- Wats.** Sereno Watson, 1826-1892. United States. Prof. and Curator of the Gray Herbarium at Harvard University. Author of a Bibliographical Index to North American Botany, and of many articles dealing mostly with the flora of the western United States and Mexico.
- Watt.** David Allan Poe Watt. Canada.
- W. Boott.** William Boott, 1805-1887. United States. Collector; student of grasses and sedges.
- W. Curtis.** See Curtis.
- Weber.** Georg Heinrich Weber, 1752-1828. Germany. Prof. of Botany at Kiel.
- Weinm.** J. A. Weinmann, 1782-1858. Russia.

Wenderoth. Georg Wilhelm Franz Wenderoth, 1774-1861. Germany. Prof. of Botany at Marburg.

Wendl., Wendland. Johann Christoph Wendland, 1755-1828. Germany.

Wettst. Richard Wettstein. Austria. Prof. and Director of the Botanic Garden at Vienna.

Wibel. August Wilhelm Eberhard Christoph Wibel, 1775-1814. Germany.

Wiegand. Karl McKay Wiegand. United States. Associate Prof. of Botany, Wellesley College.

Wiggers. Heinrich August Ludwig Wiggers, 1803-1880. Germany.

Willd. Karl Ludwig Willdenow, 1765-1812. Germany. Prof. of Botany at Berlin.

Wimmer. Friedrich Wimmer, 1803-1868. Germany.

Witasek. (Frl.) Johanna Witasek. Austria.

With. William Withering, 1741-1799. England.

Wood. Alphonso Wood, 1810-1881. United States. Author of botanical text-books, and of a flora of the Northeastern States.

Woodv. William Woodville, 1748(?) - 1805. England.

Wright. See C. Wright.

Wulf. Franz Xavier Wulfen, 1728-1805. Austria. Prof. at Klagenfurt.

Zucc. Joseph Gerhard Zuccarini, 1797-1848. Germany. Prof. of Botany at Munich.



Index.*

- Aaron's Beard 221
 Aaron's Rod 214
 Abele 141
 Abies 37
 balsamea 37
 Abutilon 278
 Abutilon 278
 pictum 278, 431
 striatum 278
 Theophrasti 278
 Avicennae 278
 Acacia
 False 251
 Rose 251
 Acalypha 265
 gracilens 265
 virginica 265
 var. *gracilens* 265
 Acanthopanax 295
 pentaphyllum 295
 Acer 272
 dasycarpum 273
 Negundo 273
 nigrum 273
 pennsylvanicum 272
 platanoides 273
 Pseudo-platanus 272
 rubrum 273
 saccharinum 272, 273
 var. *nigrum* 273
 saccharum 272
 var. *nigrum* 273
 spicatum 272
 Aceraceae 272, 437, 440
 Acerates 323
 viridiflora 323, 428
 var. *Ivesii* 323
 " *lanceolata* 323, 423
 Achillea 398
 lanulosa 398
 Millefolium 398
 Achroanthos
 monophylla 136
 unifolia 136
 Acnida 171
 cannabina 171
 tamariscina
 var. *prostrata* 171
 " *tuberculata* 171
 tuberculata 171, 433
 var. *prostrata* 171, 433
 Acorus 111
 Calamus 111
 Actaea 193
 alba 193
 rubra 193
 spicata
 var. *rubra* 193
 Adam-and-Eve 136
 Adam's Cup 213
 Adam's Needle 121
 Adder's Mouth 132
 Green 136
 White 136
 Adder's Tongue 27
 Yellow 121
 Adder's Tongue Family 27
 Adiantum 18
 pedatum 18
 Adicea
 pumila 156
 Adlumia 197
 cirrhusa 197
 fungosa 197
 Adopogon
 carolinianum 408

* In this index, synonyms and names of species previously reported from Connecticut but excluded from the present catalogue, are printed in italics.

- Adopogon*
virginicum 408
Aegopodium 299
Podagraria 299
Aesculus 274
Hippocastanum 274
Aethusa 302
Cynapium 302
African Rose 197
Agastache 334
anthiodora 334
Foeniculum 334, 434
nepetoides 334
scrophulariaefolia 334
var. *mollis* 334
Agrimonia 240
Brittoniana 240
Eupatoria 240
gryposepala 240
hirsuta 240
mollis 241
parviflora 241
pubescens 241
rostellata 241
striata 240, 241
Agrimony 240
Hairy 240
Many-flowered 241
Small 241
Soft 241
Woodland 241
Agropyron 79
caninum 79
repens 79
tenerum 79, 433
Agrostemma 177
Githago 177
Agrostis 64
alba 64
var. *aristata* 64
" *maritima* 64
" *vulgaris* 64
canina 64
coarctata 64
hyemalis 64
intermedia 64
perennans 64
Agrostis
scabra 64
var. *montana* 64
vulgaris 64
Ague Tree 195
Ague-weed 376
Ailanthus 263
glandulosa 263
Aizoaceae 173, 437, 440
Ajuga 332
genevensis 332, 428
reptans 428
Albany Hemp 155
Alder 148
Black 270
Dwarf 275
Hoary 148
Smooth 148
Snapping 148, 219
Speckled 148
Spotted 219
Tag 148
White 306
Witch 219
Alecost 400
Aletris 125
farinosa 125
Alexanders
Golden 300
Alfalfa 250
Alisma 47
Plantago-aquatica 47
Alismaceae 45, 436
Alkali Grass 72
Alkanet 329
All-bone 176
Alleghany Plum 244
Vine 197
Alliaria 205
Alliaria 205
officinalis 205, 433
Allionia
hirsuta 172
linearis 172
nyctaginea 172
Allison
Sweet 199

- Allium** 119
 canadense 119
 sativum 425
 tricoccum 119
 vineale 119
Allspice
 Wild 196
Alnus 148
 incana 148
 rugosa 148
 serrulata 148
 viridis 426
Alopecurus 62
 geniculatus 62
 var. *aristulatus* 63
 pratensis 62
Alsike Clover 249
Alsine
 borealis 175
 graminea 176
 Holostea 176
 longifolia 175
 media 176
Althaea 278
 officinalis 278
 rosea 278
Althaea
 Shrubby 279
Alum Root 215
 Common 215
Alyssum 200
 alyssoides 200, 421
 calycinum 200
 maritimum 199
 saxatile 200
Alyssum
 Hoary 199
 Small 200
 Sweet 199
Amaranth 169, 170
 Green 169
 Prostrate 170
 Purple 170
 Spiny 170
 Thorny 170
 White 170
Amaranth Family 169
Amaranthaceae 169, 437, 439
Amaranthus 169
 albus 170
 blitoides 170
 caudatus 170
 graecizans 170
 hybridus 169
 forma *hypochondriacus* 169
 var. *paniculatus* 170
 hypochondriacus 169
 paniculatus 170
 retroflexus 169
 spinosus 170
Amaryllidaceae 126, 436, 439
Amaryllis Family 126
Ambrose 165
Ambrosia 165, 391
 artemisiifolia 391
 bidentata 391, 435
 trifida 391
 var. *integrifolia* 391
Amelanchier 224
Botryapium 224
 canadensis 224
 var. *Botryapium* 224
 " *oblongifolia* 224
 " *tomentula* 224
 oblongifolia 224
 var. *micropetala* 225
 spicata 224
American Aspen 141
Beech 148
Bladder Nut 272
Brooklime 353
Cranberry 314
Elm 152
Featherfoil 315
Fly Honeysuckle 365
Germander 332
Globeflower 191
Hemp 321
Holly 269
Hornbeam 146
Ivy 276
Larch 35
Laurel 309
Linden 277
Lotus 184
Mountain Ash 223

American

- Nelumbo 184
- Nettle Tree 153
- Nightshade 171
- Pennyroyal 339
- Sanicle 215
- Sarsaparilla 296
- Senna 247
- Spikenard 296
- Sycamore 220
- Valerian 129
- White Hellebore 118
- Wood Strawberry 232
- Yew 34
- Ammodenia*
- peploides* 175
- Ammophila* 65
- arenaria* 65
- arundinacea* 65
- Amorpha* 251
- fruticosa* 251
- Ampelopsis*
- quinquefolia* 276
- trifolia* 430
- Amphicarpa* 259
- monoica* 259
- Pitcheri* 259
- Amsinckia* 328
- lycopsoides* 328, 434
- Amygdalus*
- Persica* 246
- Anacardiaceae 268, 437
- Anagallis* 317
- arvensis* 317
- var. *caerulea* 317
- Anaphalis* 389
- margaritacea* 389
- Anchusa* 329
- officinalis* 329
- Andromeda* 310
- glaucophylla* 310
- ligustrina* 310
- mariana* 310
- Polifolia* 310
- Andropogon* 48
- furcatus* 48
- littoralis* 48
- scoparius* 48

Andropogon

- var. *littoralis* 48
- virginicus* 48
- Anemone* 189
- canadensis* 190
- cylindrica* 189
- nemorosa* 190
- pennsylvanica* 190
- quinquefolia* 190
- riparia* 190
- virginiana* 190
- Anemone* 189
- Long-fruited 189
- Round-headed 190
- Round-leaved 190
- Rue 189
- Spring 190
- Summer 190
- Tall 190
- Wood 190
- Anemonella* 189
- thalictroides* 189
- Anethum* 302
- graveolens* 302, 431
- Angelica* 303
- atropurpurea* 303
- hirsuta* 303
- villosa* 303
- Angelica* 303
- High 303
- Purple 303
- Angelica Tree* 296
- Anise-root* 298
- Ankle Brier* 238
- Annual Candytuft* 201
- Pearlwort* 174
- Antennaria* 388
- ambigens* 389
- arnoglossa* 388
- canadensis* 389
- fallax* 389
- neglecta* 389
- neodioica* 389
- Parlinii* 388
- plantaginea* 389
- plantaginifolia* 389
- Anthemis* 398
- arvensis* 398

- Anthemis**
 var. *agrestis* 399
 Cotula 398
 nobilis 399, 432
 tinctoria 399
Anthoxanthum 59
 odoratum 59
Antirrhinum 351
 majus 428
 Orontium 351, 434
Anychia 172
 canadensis 172
 capillacea 172
 dichotoma 172
 polygonoides 172, 433
Aphyllon
 uniflorum 359
Apios 258
 Apios 258
 tuberosa 258
Apium
 Petroselinum 300
Aplectrum 136
 hyemale 136
 spicatum 136
Apocynaceae 321, 438, 440
Apocynum 321
 album 321
 androsaemifolium 321
 cannabinum 321
 var. *hypericifolium* 428
 " *pubescens* 321
 medium 321
 Milleri 321
 pubescens 321
 urceolifer 321
Apple 222
 Crab 222
 Devil's 194
 Hog 194
 Indian 194
 Large Crab 222
 May 194, 308
 Mock 154
 Osage 154
 Purple Thorn 348
 Apple
 Small Crab 222
 Thorn 347
 Wild 222
 Apple of Peru 347
Aquifoliaceae 269, 437
Aquilegia 192
 canadensis 192
 var. *flaviflora* 192
 vulgaris 192
Arabis 210
 canadensis 211
 confinis 211
 Drummondii 211
 glabra 210
 hirsuta 211
 laevigata 211
 lyrata 210
 perfoliata 210
Araceae 109, 436
Aralia 296
 hispida 296
 nudicaulis 296
 quinquefolia 296
 racemosa 296
 spinosa 296
 trifolia 296
Araliaceae 295, 438, 440
Arbor Vitae 37
Arbutus
 Trailing 311
Arceuthobium 156
 pusillum 156
Arctium 404
 Lappa 404
 var. *majus* 404
 " *minus* 405
 " *tomentosum* 405
 minus 405
 tomentosum 405
Arctostaphylos 311
 Uva-ursi 311
Arenaria 174
 eroenlandica 175
 lateriflora 174
 macrophylla 174

- Arenaria**
Michauxii 175
peploides 175
serpyllifolia 175
stricta 175
Arethusa 133
bulbosa 133
Argemone 197
alba 197, 431
mexicana 197, 431
Argentina 234
Anserina
var. *grandis* 234
Arisaema 109
Dracontium 110
pusillum 109
triphyllum 109
var. *pusillum* 109
Aristida 60
dichotoma 60
gracilis 60
var. *depauperata* 60
purpurascens 60
tuberosa 60
Aristolochia 157
Serpentaria 157
Aristolochiaceae 157, 437
Arnica 409
Aromatic Wintergreen 311
Aronia
arbutifolia 222
atropurpurea 223
nigra 223
Arrhenatherum 67
avenaceum 67
elatus 67
Arrow Arum 110
Grass 45
Grass Family 45
Arrow-head 45
Arrow-leaved Tear-thumb 163
Arrow-wood 368
Downy 368
Indian 271
Art Pumpkin 371
Artemisia 400
Abrotanum 401, 432
Artemisia
Absinthium 402
annua 401, 435
biennis 401
campestris
var. *pubescens* 401, 435
caudata 400
Dracunculus 401, 435
frigida 402, 435
pontica 402
Stelleriana 401
vulgaris 401
Artichoke
Jerusalem 395
Arum
Arrow 110
Dragon 109
Water 110
Arum Family 109
Asarabacca 157
Asarum 157
acuminatum 157
canadense 157
var. *acuminatum* 157
" *reflexum* 157
reflexum 157
Asclepiadaceae 322, 438, 440
Asclepias 322
amplexicaulis 323
Cornuti 322
decumbens 322
exaltata 323
incarnata 322
var. *pulchra* 322
lanceolata 428
obtusifolia 323
ovalifolia 428
parviflora 428
paupercula 428
perennis 428
phytolaccoides 323
pulchra 322
purpurascens 322
quadrifolia 323
syriaca 322
tuberosa 322
var. *decumbens* 322

- Asclepias*
 variegata 323
 verticillata 323
Asclepiodora
 viridis 428
Ash 317
 American Mountain 223
 Basket 318
 Black 318
 Brown 318
 European Mountain 223
 Green 318
 Hoop 153, 318
 Northern Prickly 262
 Prickly 262
 Red 318
 River 318
 Swamp 318
 White 317
Ash-leaved Maple 273
 Spiraea 221
Asparagus 122
 officinalis 122
Asparagus 122
 Garden 122
 Wild 125
Aspen 141
 American 141
 Large-toothed 142
 Quaking 141
Asperula 361
 galioides 361
 glauca 361
Aspidium 22
 acrostichoides 21
 var. incisum 21
 Boottii 23
 cristatum 23
 var. Clintonianum 23
 Goldianum 22
 marginale 22
 var. elegans 416
 noveboracense 22
 simulatum 22
 spinulosum 23
 var. dilatatum 24
 forma anadenium 24
Aspidium
 var. intermedium 23
 Thelypteris 22
Asplenium 19
 acrostichoides 21
 angustifolium 20
 ebeneum 20
 ebenoides 19
 Filix-femina 21
 montanum 20
 pinnatifidum 19
 platyneuron 20
 var. serratum 20
 Ruta-muraria 20
 thelypteroides 21
 Trichomanes 20
 viride 424
Asprella
 Hystrix 81
Aster 382, 441
 acuminatus 387
 amethystinus 384
 carmesinus 382
 Claytoni 382
 var. crispicans 382
 concinus 384
 concolor 429
 cordifolius 383
 var. lanceolatus 383
 " *polycephalus* 383
 corymbosus 382
 curvescens 382
 var. oviformis 382
 " *umbelliformis* 382
 diffusus 385
 var. hirsuticaulis 385
 " *thyrsoides* 385
 divaricatus 382
 dumosus 384
 var. coridifolius 384
 " *strictior* 384
 ericoides 384
 var. pilosus 384
 " *villosus* 384
 Gravesii 384
 Herveyi 382
 hirsuticaulis 385

Aster

- ianthinus* 382
- infirmus* 386
- laevis* 383
 - var. *ampliifolius* 384
- lateriflorus* 385
 - var. *hirsuticaulis* 385
 - " *pendulus* 385
 - " *thyrsoides* 385
- linariifolius* 386
- longifolius* 385
- Lowricanus* 383
 - var. *lanceolatus* 383
 - " *lancifolius* 383
- macrophyllus* 382
 - var. *ianthinus* 382
 - " *pinguifolius* 382
- multiflorus* 384
 - var. *exiguus* 384
- multiformis* 382
- nobilis* 382
 - var. *novae-angliae* 383
 - var. *roseus* 383
- novi-belgii* 385
- paniculatus* 385
 - var. *acutidens* 385
 - " *simplex* 385
- patens* 383
- preanthoides* 386
- puniceus* 386
 - var. *compactus* 386
 - " *demissus* 386
 - " *firmus* 386
 - " *laevicaulis* 386
 - " *lucidulus* 386
- radula* 383
- roscidus* 382
- sagittifolius* 429
- salicifolius* 429
- Schreberi* 382
- spectabilis* 382
- subulatus* 387
- tardiflorus* 386
- tataricus* 386
- tenebrosus* 382
- tenuifolius* 387
- Tradescanti* 385

Aster

- umbellatus* 386
 - var. *latifolius* 429
- undulatus* 383
- vimineus* 385
 - var. *foliolosus* 385
- violaris* 382
- Aster** 382
 - Golden 377
 - New England 383
 - Red-stalked 386
 - Siberian 386
 - White-topped 388
- Atheropogon*
 - curtipendulus* 69
- Atragene*
 - americana* 190
- Atriplex* 167
 - arenaria* 168
 - hastata* 167
 - laciniata* 167
 - patula* 167
 - var. *hastata* 167, 426
 - tatarica* 167, 433
- Autumn Willow 138
- Avena* 67
 - fatua* 425
 - sativa* 67, 431
 - striata* 72
- Avens** 235
 - Cream-colored 235
 - Drooping 235
 - Field 235
 - Purple 235
 - Rough 235
 - Water 235
 - White 235
 - Yellow 235
- Awed Wheat Grass 79
- Axwort* 252
- Azalea*
 - arborescens* 427
 - canescens* 308
 - nudiflora* 308
 - viscosa* 307
- Azalea**
 - Clammy 307

- Azalea
 Pink 308
 Purple 308
 Wild 308
 Babies' Breath 121
 Baccharis 388
 halimifolia 388
 Bachelor's Button 407
 Bag-leaves 214
 Ball Mustard 202
 Balloon Vine 274
 Ballota 336
 nigra 336
 Balm 339
 Basil 338
 Bee 338
 Common 339
 Fragrant 338
 Horse 344
 Lemon 339
 Balm of Gilead 142
 Balm-of-Gilead Fir 37
 Balmony 352
 Balsam 274
 Balsam Fir 37
 Poplar 142
 Balsam-apple 371
 Wild 372
 Balsaminaceae 274, 438
 Baneberry 193
 Red 193
 White 193
 Bank Cress 205
 Baptisia 247
 australis 426
 tinctoria 247
 Barbarea 207
 Barbarea 207
 praecox 208
 stricta 208
 verna 208
 vulgaris 207
 var. *stricta* 208
 Barberry 195
 Common 195
 European 195
 Barberry Family 194
 Barley 80
 Common 80
 Barnyard Grass 56
 Barren Strawberry 232
 Bartonnia 320
 lanceolata 320
 paniculata 320
 tenella 320
 virginica 320
 Basil 339, 340
 Basil Balm 338
 Basket Ash 318
 Basswood 277
 Bastard Cress 200, 201
 Indigo 251
 Mustard 203
 Pennyroyal 332
 Toad-flax 156
Batrachium
 confervoides 185
 divaricatum 184
 Drouetii 185
 flaccidum 185
 longirostre 184
 trichophyllum 184
 Bay
 Rose 308
 Bayberry 143
 Bay-leaved Willow 138
 Beach Grass 65
 Orach 168
 Pea 257
 Pinweed 283
 Plum 244
 Wormwood 401
 Beak Rush 90
 Beaked Hazelnut 146
 Willow 140
 Bean
 Blue 248
 Bog 320
 Bush 258
 Common Pole 258
 European Garden 256
 Field 258
 Indian 359
 Kidney 258

Bean

- Kidney Pole 258
- Sacred 184
- Trailing Wild 258
- Wild 258

Bean Tree 359

- Bear Grass 121
- Oak 152

Bearberry 311**Beard Grass 48, 65****Bearded Darnel 78****Beard-tongue 351****Beaver Poison 299****Bedstraw 361**

- Northern 362
- Rough 363
- Sweet-scented 363
- Yellow 362

Bee Balm 338**Beech 148**

- American 148
- Blue 146
- Water 146

Beech Family 148

- Fern 17

Beech-drops 359

- False 307

Beech-wheat 164**Beet 167**

- Common 167

Beet-root 169**Beggar's Lice 328****Beggar-ticks 240, 396**

- Common 396
- Swamp 396

Beggar-weed 173**Behen 180****Belamcanda 128**

- chinensis 128

Belle Isle Cress 208**Belleville Dock 159****Bellflower 373**

- Marsh 373

Bells 192**Bellwort 118, 119****Benjamin Bush 196****Bent**

- Fine 64
- Rhode Island 64
- Rough 64

Bent Grass 64**Benzoin 196**

- aestivale 196
- Benzoin 196

Berberidaceae 194, 437, 440**Berberis 195**

- canadensis 426
- vulgaris 195, 426

Bergamot

- Downy 338
- Wild 338

Bergamot Mint 343**Bermuda Grass 69****Berteroa 199**

- incana 199

Beta 167

- vulgaris 167, 421, 431

Betony

- Paul's 354
- Wood 357

Betula 146

- alba
 - var. cordifolia 148
 - " papyrifera 147
- lenta 147
- lutea 147
- papyrifera 147
- populifolia 147
- pumila 148

Betulaceae 146, 436**Bibernel 241****Bicuculla**

- canadensis 198
- Cucullaria 198

Bidens 396, 441

- aristosa 397, 435
- Beckii 397
- bipinnata 397
- cernua 396
 - var. elliptica 396
- chrysanthemoides 396
- comosa 396
- connata 422

- Bidens
 var. *comosa* 396
 " *petiolata* 396
 discoidea 396
 frondosa 396
 laevis 396
 leucantha 397, 435
 melanocarpa 396
 trichosperma 397, 423
 vulgata 396
 Big Blue-stem 48
 Bignonia Family 359
 Bignoniaceae 359, 438, 440
 Bilberry
 Common 313
 Swamp 313
 Billion-Dollar Grass 56
 Bilsted 220
 Bindweed 324
 Black 163
 Blackbird 163
 Bush 163
 Corn 163
 Field 325
 Fringed Black 163
 Hedge 163, 325
 Sow 163
 Thicket 163
 Birch 146
 Black 147
 Canoe 147, 148
 Cherry 147
 Gray 147
 Low 148
 Old Field 147
 Paper 147, 148
 Swamp 148
 Sweet 147
 White 147, 148
 Yellow 147
 Birch Family 146
 Bird Cherry 244, 245
 Bird-foot Violet 284
 Bird-in-the-Bush 197
 Bird's Pepper 200
 Bird's-eye 174, 354
 White 176
 Bird's-eye Maple 273
 Bird's-foot Trefoil 250
 Bird's-tongue 160
 Birthroot 124
 Birthwort 157
 Birthwort Family 157
 Bishop's Cap 216
 Bishop's-weed
 Mock 299
 Bite-tongue 162
 Biting Crowfoot 186
 Stonecrop 214
 Bitter Candytuft 201
 Cress 207, 209, 210
 Dock 159
 Nut Hickory 145
 Willow 141
 Bitter-sweet 345
 Climbing 271
 Shrubby 271
 Bitter-weed 391
 Black Alder 270
 Ash 318
 Bindweed 163
 Birch 147
 Centaury 407
 Cherry 245
 Chokeberry 223
 Cohosh 192
 Currant 218
 Grass 114
 Gum 305
 Haw 369
 Henbane 422
 High Blueberry 314
 Horehound 336
 Huckleberry 312
 Larch 35
 Locust 251
 Medick 250
 Mustard 203
 Nightshade 345
 Oak 152
 Poplar 143
 Raspberry 237
 Scrub Oak 152
 Snakeroot 192, 297

- Bridal Wreath 221
Bridewort 221, 235
Brier
 Ankle 238
 Bull 125
 Cat 125
 Common Green 125
 Green 125
 Horse 125
 Running 239
 Sand 345
 Saw 125
 Squirrel 125
Brier Rose 242
Bristly Buttercup 187
 Crowfoot 187
 Locust 251
 Sarsaparilla 296
Brittle Willow 138
Briza 72
 media 72, 417
Broad Dock 159
Broad-leaved Spring Beauty 182
Brome Grass 76
Bromus 76, 441
 altissimus 77, 417
 brizaeformis 77
 ciliatus 77
 var. *purgans* 77
 commutatus 77, 417
 erectus 78
 hordeaceus 77
 incanus 417
 inermis 78
 Kalmii 78
 mollis 77
 purgans 77
 racemosus 77
 secalinus 76
 squarrosus 77, 433
 sterilis 417
 tectorum 77
Brook Cress 210
Brooklime 206
 American 353
Brook-weed 315
Broom 248
 Broom
 Scotch 248
 Broom Corn 49
 Corn Millet 51
 Hickory 145
 Broom-rape 359
 Broom-rape Family 359
 Broussonetia 154
 papyrifera 154
 Brown Ash 318
Brunella
 vulgaris 335
Buckbean 320
Buckberry 313
Buckeye 274
Buckthorn 275
 Common 275
Buckthorn Family 275
Buckwheat 164
 Bush 163
 Climbing False 163
 Climbing Wild 163
 Thicket 163
 Wild 163
Buckwheat Family 157
Buda
 borealis 173
 marina 173
 rubra 173
Buffalo Bur 346
Currant 219
Bugbane 192
Bugle
 Erect 332
Bugle Weed 332, 341
Bugloss
 Viper's 330
Bulbous Buttercup 188
 Crowfoot 188
Bull Brier 125
 Grass 68
 Nettle 345
 Thistle 405, 406
Bullace Plum 244
Bull-head Lily 183
Bull-rattle 178
Bulrush 85, 115

- Bulrush
 Great 86
 River 87
 Bunch Grape 276
 Grass 48
 Pink 181
 Bunchberry 304
 Bunch-flower
 Crisped 118
Bupleurum
 rotundifolium 427
 Bur Clover 250
 Grass 58
 Marigold 396
 Oak 150
 Burdock 404
 Common 405
 Great 404
 Burnet 241
 Canadian 241
 Garden 241
 Great American 241
 Salad 241
 Wild 241
 Burnet Rose 242
 Burning Bush 271
 Bur-reed 39
 Bur-reed Family 39
Bursa
 Bursa-pastoris 201
 Bush Bean 258
 Bindweed 163
 Buckwheat 163
 Clover 254
 Honeysuckle 365
 Bushy Knotweed 160
 Pigweed 170
 Butter and Eggs 350
 Butter Flowers 188
 Butterbur 402
 Buttercup 184
 Bristly 187
 Bulbous 188
 Creeping 187
 Early 187
 Marsh 187
 Meadow 188
 Buttercup
 Running 234
 Spotted-leaf 187
 Swamp 187
 Tall 188
 Tufted 187
 Wood 187
 Buttercups 188
 Butterfly-weed 322
 Butternut 144
 Butter-weed 387
 Button Snakeroot 297, 377
 Buttonball 220
 Buttonbush 364
 Buttonweed 363
 Buttonwood 220
 Cabbage 204
 Skunk 110
 Cabinet Cherry 243
 Cacalia 403
 suaveolens 403
 Cactaceae 289, 438
 Cactus Family 289
 Cadlock 203
 Cakile 202
 americana 202
 edentula 202
 Calamagrostis 65
 canadensis 65
 cinnoides 65
 Nuttalliana 65
 Calamint 339
 Calamintha
 Clinopodium 339
 Calamus 111
 Calendula 403
 officinalis 403, 432
 Calico Bush 309
 California Peppergrass 203
 Poppy 196
 Rose 324
 Calla 110
 palustris 110
 Calla
 Marsh 110
 Wild 110
 Callitrichaceae 267, 437

- Callitriche 267
 Austini 267
 deflexa
 var. *Austini* 267
 heterophylla 267
 palustris 267
 verna 267
 Calopogon 133
 pulchellus 133
 Caltha 191
 palustris 191
 Camelina 201
 microcarpa 202, 433
 sativa 201, 433
 silvestris 202
 Campanula 373
 americana 429
 aparinoides 373
 carpatica 373, 435
 intercedens 373
 patula 373, 435
 rapunculoides 373
 var. *ucranica* 373
 rotundifolia 373
 Campanulaceae 372, 439, 441
 Campion 177, 179
 Bladder 180
 Day-blooming 178
 Four-leaved 180
 Meadow 178
 Morning 178
 Red 178
 Rose 177
 Starry 180
 White 178
 Camptosorus 21
 rhizophyllus 21
 Canada Blue Grass 73
 Coltsfoot 157
 Fleabane 387
 Hawkweed 415
 Lily 120
 Nettle 155
 Plum 246
 Squash 372
 Thistle 406
 Violet 288
 Canadian Burnet 241
 Hemp 321
 Canary Grass 58
 Vine 197
 Cancer-root 191, 359
 One-flowered 359
 Candle Rush 115
 Tree 359
 Candlewood 143
 Candytuft 201
 Annual 201
 Bitter 201
 Canker Rose 197, 242
 Canker-root 314
 Cannabis 153
 indica 153
 sativa 153
 Canoe Birch 147, 148
 Canoe-wood 194
 Cantaloupe 371
 Caper Family 211
 Spurge 267
 Capillaire 312
 Capnoides
 sempervirens 198
 Capparidaceae 211, 437, 440
 Caprifoliaceae 365, 438, 441
Capriola
 Dactylon 69
 Capsella 201
 Bursa-pastoris 201
 Capsicum 344
 annuum 344, 432
 Caraway 300
 Cardamine 209
 arenicola 210
 bulbosa 209
 var. *purpurea* 210
 Douglassii 209
 hirsuta 210
 var. *sylvatica* 210
 parviflora 210
 pennsylvanica 210
 pratensis 210
 purpurea 189, 209
 rhomboidea 209
 var. *purpurea* 209

Cardinal-flower 374
 Cardiospermum 274
 Halicacabum 274, 434
 Carduus 405
 acanthoides 405, 435
 altissimus 406
 arvensis 406
 discolor 405
 lanceolatus 405
 muticus 406
 odoratus 406
 spinosissimus 405
 Careless 169
 Carex 91, 441
 adusta 425
 aenea 94
 aestivalis 100, 418
 alata 93
 albolutescens 92
 albursina 103
 aquatilis 98
 arctata 105
 Asa-Grayi 108
 atlantica 94
 aurea 98, 418
 Baileyi 107
 Bebbii 93
 Bicknellii 93
 bromoides 95
 brunnescens 95
 bullata 109
 var. *Greenii* 109
 " *Olneyi* 109
 canescens 95
 var. *alpicola* 95
 " *disjuncta* 95
 " *subloliacea* 95
 " *vulgaris* 95
 castanea 105, 419
 cephaloidea 97
 cephalophora 97
 communis 100
 var. *Wheeleri* 100
 comosa 107
 conoidea 104
 costellata 99
 Crawei 104

Carex
 Crawfordii 92
 crinita 97
 var. *gynandra* 97
 cristata 92
 cristatella 92
 Davisii 99, 418
 debilis
 var. *interjecta* 105
 " *Rudgei* 105
 Deweyana 96
 diandra 97
 var. *ramosa* 97
 digitalis 102
 eburnea 102
 echinata
 var. *angustata* 94
 " *cephalantha* 94
 " *conferta* 94
 " *microstachys* 94
 exilis 425
 festucacea 93
 var. *brevior* 93
 filiformis 106
 var. *latifolia* 106
 flava 104, 419
 var. *elatior* 105
 " *graminis* 105
 " *rectirostra* 105
 " *viridula* 105
 foenea 94
 var. *perplexa* 94, 418
 folliculata 108
 formosa 99
 fusca 99
 glaucodea 104
 Goodenowii 425
 gracillima 99
 granularis 104
 var. *Haleana* 104
 " *Schriveri* 104
 Grayii 108
 var. *hispidula* 108
 grisea 104
 var. *angustifolia* 104
 " *rigida* 104
 gynandra 98

Carex

- Haydeni* 98
- Hitchcockiana* 104
- hormathodes* 93
 - var. *invisa* 93
 - " *Richii* 93
- hystericina* 107
 - var. *Cooleyi* 107
 - " *Dudleyi* 107
- interior* 94
 - var. *capillacea* 95
- intumescens* 108
 - var. *Fernaldii* 108, 419
- lanuginosa* 106
- laxiculmis* 102
- laxiflora* 103
 - var. *blanda* 103
 - " *gracillima* 103
 - " *latifolia* 103
 - " *leptonervia* 103
 - " *patulifolia* 103
 - " *striatula* 103
 - " *styloflexa* 103
 - " *varians* 103
- leptalea* 99
- limosa* 101
- littoralis* 101
- livida* 101, 423
- longirostris* 105
- lupuliformis* 108
- lupulina* 108
 - var. *pedunculata* 108
 - " *polystachya* 108
- lurida* 107
 - var. *exundans* 107
 - " *flaccida* 107
 - " *gracilis* 107
 - " *parvula* 107
- magellanica* 101
- mirabilis* 92
 - var. *perlonga* 92
 - " *tincta* 92
- monile* 108
- Muhlenbergii* 96
 - var. *enervis* 96
 - " *xalapensis* 96
- nigro-marginata* 100

Carex

- Oederi*
 - var. *pumila* 105
- oligocarpa* 104
- oligosperma* 106
- pallescens* 101
- panicea* 101
- pauciflora* 99
- paupercula*
 - var. *pallens* 101
- pedicellata* 100
 - var. *Wheeleri* 100
- pedunculata* 102
- pennsylvanica* 100
 - var. *lucorum* 100
- plantaginea* 102
- platyphylla* 102
- polygama* 99
- polymorpha* 101, 419
- polytrichoides* 99
- prasina* 102
- Pseudo-Cyperus* 107
 - var. *americana* 107
- ptychocarpa* 103
- pubescens* 101
- retroflexa* 96
- retrorsa* 107, 419
- riparia* 106
- rosea* 96
 - var. *minor* 96
 - " *radiata* 96
 - " *retroflexa* 96
- rostrata* 109
 - var. *utriculata* 109
- scabrata* 106
- Schweinitzii* 107
- scirpoides* 94
 - var. *capillacea* 95
- scoparia* 91
 - var. *condensa* 91
 - " *moniliformis* 91
- seorsa* 95
- setacea*
 - var. *ambigua* 97
- setifolia* 102
- Shriveri* 104
- siccata* 92

Carex

- silicea* 93
- sparganioides* 97
- squarrosa* 106
- stellulata* 94
 - var. *angustata* 94
 - " *cephalantha* 94
 - " *excelsior* 94
 - " *ormantha* 94
- sterilis* 94
 - var. *cephalantha* 94
 - " *excelsior* 94
- stipata* 97
- straminea* 93, 418
 - var. *alata* 93
 - " *aperta* 93
 - " *brevior* 93
 - " *cumulata* 92
 - " *foenea* 92
 - " *invisa* 93
 - " *mirabilis* 92
- stricta* 98
 - var. *angustata* 98
 - " *curtissima* 98
 - " *decora* 98
 - " *xerocarpa* 98
- styloflexa* 103
- tenella* 96
- tenera* 93
- tenuis* 105
- teretiuscula* 97
 - var. *prairea* 97
 - " *ramosa* 97
- tetanica* 101
 - var. *Woodii* 101
- torta* 98
- tribuloides* 92
 - var. *cristata* 92
 - " *moniliformis* 92
 - " *reducta* 92, 418
 - " *turbata* 92
- triceps* 99
 - var. *hirsuta* 99
- trichocarpa* 106, 419
- trisperma* 96
 - var. *Billingsii* 418
- Tuckermanni* 109

Carex

- typhina* 106
- typhinoides* 106
- umbellata* 100
 - var. *brevirostris* 418
 - " *tonsa* 100
- utriculata* 109
 - var. *minor* 109
- varia* 100
 - var. *colorata* 100
- vesicaria* 108
 - var. *distenta* 108
 - " *jejuna* 108
 - " *monile* 108
- vestita* 106
- virescens* 99
 - var. *costata* 99
 - " *Swanii* 99
- viridula* 105
- vulpinoidea* 97
- Willdenowii* 100
- xanthocarpa* 97
 - var. *annectens* 97
- Carnation 181
- Carpenter-weed 335
- Carpet Weed 173
- Carpet Weed Family 173
- Carpinus 146
 - caroliniana* 146
- Carrion-flower 125
- Carrot 303
 - Wild 303
- Carum 300
 - Carvi* 300
 - Petroselinum* 300
- Carya 144
 - alba* 144, 145
 - amara* 145
 - cordiformis* 145
 - glabra* 145
 - microcarpa* 145
 - ovata* 144
 - porcina* 145
 - tomentosa* 145
- Caryophyllaceae 173, 437, 440
- Cashew Family 268
- Cassandra* 310

- Cassandra*
calyculata 310
Cassia 247
Chamaecrista 247
marilandica 247
nictitans 247
Castalia 183
odorata 183
tuberosa 184
Castanea 149
dentata 149
saliva
var. *americana* 149
Castilleja 356
coccinea 356
Castor-oil Plant 265
Cat Brier 125
Mint 334
Spruce 36
Catalpa 359
bignonioides 359
Catalpa 359
Catchfly 179
Forked 179
Garden 179
Lobel's 179
Night-flowering 179
Sleepy 179
Snapdragon 179
Sweet William 179
Catgut 251
Catnip 334
Cat's-ear 409
Cat-tail 39
Common 39
Cat-tail Family 39
Flag 39
Grass 62
Caulophyllum 195
thalictroides 195
Cayenne Pepper 344
Ceanothus 275
americanus 275
Cedar
Red 38
White 37
Celandine 196
Celastraceae 271, 437, 440
Celastrus 271
scandens 271
Celery
Water 186
Wild 47
Celtis 153
occidentalis 153
var. *pumila* 153
Cenchrus 58
carolinianus 58
tribuloides 58
Centaurea 407
arvensis 430
Cyanus 407
Jacea 407
var. *lacera* 407
maculosa 408
nigra 407
var. *radiata* 407, 435
vochinensis 408
Centaury
Black 407
Meadow 407
Cephalanthus 364
occidentalis 364
Cerastium 176
arvensis 176
longipedunculatum 177
nutans 177
semidecandrum 177
viscosum 426
vulgatum 176
Ceratophyllaceae 182, 437
Ceratophyllum 182
demersum 182
var. *echinatum* 182
Cercis 247
canadensis 247, 434
Chadlock 202, 203
Jointed 202
White 202
Chaenorrhinum
minus 350
Chaetochloa
glauca 57
italica 57

- Chaetochloa*
versicolor 57
verticillata 57
viridis 57
 Chaff-seed 357
 Chain Fern 19
 Chair-maker's Rush 86
Chamaecyparis 37
sphaeroidea 37
thyoides 37
Chamaedaphne 310
calyculata 310
Chamaelirium 118
carolinianum 118
luteum 118
Chamaenerion
angustifolium 291
 Chamomile 398
 Corn 398
 Fetid 398
 Garden 399
 German 399
 Wild 399
 Yellow 399
 Champion Oak 151
 Charlock 202, 203
 Jointed 202
 White 202
 Cheat 76, 201, 202
 Checkerberry 311, 364
 Cheeses 279
Cheilanthes 18
lanosa 18
vestita 18
Chelidonium 196
majus 196
Chelone 352
glabra 352
Chenopodiaceae 165, 437, 439
Chenopodium 165, 441
 album 166
 var. *viride* 166
 ambrosioides 165
 var. *anthelminticum* 165
anthelminticum 165
Bonus-Henricus 426
Boscianum 167
Chenopodium
 Botrys 165
 capitatum 166, 433
 glaucum 166
 hybridum 166
 leptophyllum 167
 murale 167
 rubrum 166
 urbicum 167
 Cherry 243, 245
 Bird 244, 245
 Black 245
 Cabinet 243
 Choke 244
 Dwarf 245
 Fire 244
 Ground 346
 Mahaleb 245
 Mazzard 245
 Morello 245
 Old-fashioned 245
 Perfumed 245
 Pie 245
 Pin 244
 Red 245
 Rum 243
 Saint Lucie 245
 Sand 245
 Sour 245
 Sweet 245
 Whiskey 243
 Wild 243
 " Black 243
 " Red 244
 Winter 346
 Cherry Birch 147
 Chervil
 Sweet 298
 Chess 76
 Soft 77
 Wild 78
 Wood 77
 Chestnut 149, 151
 Chestnut Oak 150
 Chick Pea 255
 Chicken-toes 135, 168
 Chickweed 175

- Chickweed**
 Common 176
 " Mouse-ear 176
 Field 176
 Forked 172
 Gravel 172
 Indian 173
 Larger Mouse-ear 176
 Meadow 176
 Mouse-ear 176
 Nodding 177
 Sea 175
 Small Mouse-ear 177
 Winter 176
Chickweed Wintergreen 316
Chicory 408
 Common 408
Chili Pepper 344
Chimaphila 306
 maculata 306
 umbellata 306
China Squash 372
Chinese Mustard 203
Chinquapin
 Water 184
Chinquapin Oak 151
Chiogenes 312
 hispidula 312
 serpyllifolia 312
Chocolate-root 235
 Indian 235
Choke Cherry 244
 Pear 222
Chokeberry 223
 Black 223
 Purple 223
 Red 223
Christmas Fern 21
 " Green 31
Chrysanthemum 400
 Balsamita
 var. tanacetoides 400
 Leucanthemum 400
 var. pinnatifidum 400
 Parthenium 400
Chrysopogon
 avenaceus 49
Chrysopogon
 nutans 49
Chrysopsis 377
 ialcata 377
 mariana 429
Chrysosplenium 216
 americanum 216
Cicely
 Sweet 298
Cicer 255
 arietinum 255, 430
Cichorium 408
 Intybus 408
 var. divaricatum 408
Cicuta 299
 bulbifera 299
 maculata 299
Cimicifuga 192
 racemosa 192
 var. dissecta 193
Cinna 65
 arundinacea 65
 latifolia 65
 pendula 65
Cinnamon Fern 27
 Rose 242
Cinnamon-wood 195
Cinquefoil 232, 234
 Downy 233
 Hoary 233
 Marsh 233
 Mountain 233
 Purple 233
 Rough 232
 Shrubby 233
 Silvery 233
 Tall 232
 Three-toothed 233
Circaea 294
 alpina 294
 lutetiana 294
Cirsium 405
 altissimum 406, 432
 arvense 406
 var. integrifolium 406
 " vestitum 406
 discolor 405

- Cirsium*
 lanceolatum 405
 muticum 406
 pumilum 406
 spinosissimum 405
Cissus
 Ampelopsis 427
 arborea 427
 Cistaceae 282, 438
 Citron 371
 Citrullus 371
 Citrullus 371
 vulgaris 371, 432
 City Goosefoot 167
 Cladium 91
 mariscoides 91
 Clammy Azalea 307
 Cuphea 290
 Locust 251
 Clammy-weed 211
 Claytonia 182
 caroliniana 182, 189
 virginica 182
 Clearweed 156
 Cleavers 361
 Clematis 190
 verticillaris 190
 virginiana 190
 Clematis
 Mountain 190
 Purple 190
 Wild 190
 Cleome 212
 spinosa 212, 431
 Cleome
 Prickly 212
 Clethra 306
 alnifolia 306
 Cliff Brake 18
 Climbing Bitter-sweet 271
 Boneset 377
 False Buckwheat 163
 Fern 26
 Fumitory 197
 Hemp-weed 377
 Rose 242
 Clinopodium
 vulgare 339
 Clintonia 122
 borealis 122
 Clintonia 122
 Yellow 122
 Clitoria
 mariana 426
 Closed Gentian 320
 Clotbur 391
 Prickly 391
 Spiny 391
 Clove Currant 219
 Clover 248
 Alsike 249
 Bokhara 249
 Bur 250
 Bush 254
 Common Red 248
 Crimson 248
 Honeysuckle 249
 Hop 249
 Italian 248
 Low Hop 249
 Meadow 248
 Pea-vine 248
 Rabbit-foot 248
 Red 248
 Russian 252
 Stone 248
 Swedish 249
 Sweet 249
 White 249
 " Sweet 249
 Yellow 249
 " Sweet 249
 Clover Dodder 325
 Clown's Mustard 201
 Club Moss 30
 Moss Family 30
 Rush 85
 Cnicus
 altissimus 406
 var. *discolor* 405
 arvensis 406
 horridulus 405

*Cnicus**lanceolatus* 405*muticus* 406*pumilus* 406

Coast Blite 166

Germander 332

Goosefoot 166

Jointweed 164

Cock Sorrel 159

Cockle 177, 180

Corn 177

Cocklebur 240, 391

Cocksfoot 192

Cocksfoot Grass 56

Cockspur Grass 56

Thorn 225

*Coeloglossum**bracteatum* 130

Coffee

Wild 367

Cohosh 193

Black 192

Blue 195

Rattle 192

Red 193

White 193

Cole

Sea 202

Colic-root 125, 126

Coliseum Ivy 350

Collinsonia 344

canadensis 344

Coltsfoot 402

Canada 157

False 157

Sweet 157, 402

Columbine 192

European 192

Feathered 188

Garden 192

Red 192

Wild 192

Comandra 156

umbellata 156*Comarum**palustre* 233

Comfrey 328

Comfrey

Common 328

Rough 329

Wild 328

Commelina 113

communis 113*nudiflora* 113

Commelinaceae 113, 430, 439

Compositae 375, 439, 441

Composite Family 375

*Comptonia**peregrina* 143

Cone-flower 392, 393

Purple 393

Tall 393

Conioselinum 303

canadense 303*chinense* 303

Conium 298

maculatum 298

Conopholis 359

americana 359

Conringia 204

orientalis 204, 433

Convallaria 124

majalis 124

Convolvulaceae 324, 438, 440

Convolvulus 324

arvensis 325*japonicus* 324*repens* 325*sepium* 325var. *americanus* 325" *pubescens* 325" *repens* 325*spithameus* 324

Convolvulus Family 324

Coolweed 156

Coolwort 215

Coptis 191

trifolia 191

Coral Root 135

Early 135

Large 135

Coral-herry 193, 366

Corallorrhiza 135

Corallorrhiza 135

- Corallorrhiza**
innata 135
maculata 135
multiflora 135
 var. *flavida* 135
odontorrhiza 135
trifida 135
Cord Grass 68
Coreopsis 395
 aristosa 397
 discoidea 396
 lanceolata 396
 rosea 429
 tinctoria 395
 trichosperma 397
Coriander 302
Coriandrum 302
 sativum 302, 434
Corn 48
 Broom 49
 Indian 48
 Kaffir 49
 Squirrel 198
 Turkey 198
 Wild Broom 70
Corn Bindweed 163
 Chamomile 398
 Cockle 177
 Grass 55, 56
 Gromwell 329
 Kale 203
 Mustard 203
 Poppy 197
 Rose 197
 Salad 370
 Speedwell 354
 Spurrey 173
Cornaceae 304, 438
Cornel 304
 Dwarf 304
 Low 304
 Panicled 305
 Red-osier 305
 Round-leaved 304
 Silky 305
Corn-flower 407
Cornus 304
 alternifolia 305
 Amomum 305
 canadensis 304
 candidissima 305
 circinata 304
 florida 304
 paniculata 305
 Perpusi 305
 sericea 305
 stolonifera 305
Coronilla 252
 varia 252
Corpse Plant 307
Corydalis 198
 glauca 198
 sempervirens 198
Corydalis
 Pale 198
 Pink 198
Corylus 146
 americana 146
 heterophylla 420, 433
 rostrata 146
Costmary 400
Cotton Grass 90
 Thistle 407
Cottonwood 142
Couch Grass 79
Coughwort 402
Cow Bells 180
 Cress 201
 Lily 183
 Parsnip 303
 Sorrel 159
 Vetch 256
 Wheat 356
Cowbane
 Spotted 209
Cow-herb 180
Cow-quake 173
Cow-rattle 180
Cowslips 191
Crab
 Siberian 222
Crab Apple 222
 Grass 50, 61, 69, 160, 168

*Cracca**virginiana* 251

Crack Willow 138

Crambling Rocket 212

Cramp-bark 368

Cranberry 313, 314

American 314

High-bush 368

Large 314

Small 314

Cranberry Tree 368

Cranesbill 261

Cut-leaved 262

Dove's-foot 262

Meadow 261

Small-flowered 262

Wild 261

*Crantzia**lineata* 301

Crashes 206

Crassulaceae 214, 437, 440

Crataegus 225, 441

apposita 226var. *Bissellii* 226*Arnoldiana* 230*Baxteri* 226*Bissellii* 226*Brainerdi* 230var. *scabrida* 230*coccinea* 226var. *macracantha* 230" *rotundifolia* 227" *viridis* 226*cognata* 228*conjuncta* 229*cristata* 229*Crus-galli* 225var. *exigua* 226*demissa* 227*dissimilis* 228*dissona* 228*Dodgei* 227*Eamesii* 230*exigua* 226*ferentaria* 231*festiva* 229*flabellata* 227*Crataegus**foetida* 226*Forbesae* 228*fretalis* 230*fulgens* 231*genialis* 228*glaucophylla* 228*Gravesii* 227*Grayana* 227*Hargerii* 227*Holmesiana* 229*incisa* 229*intricata* 226*Jesupi* 229*latisepala* 228*levis* 229*littoralis* 229*lobulata* 229*macracantha* 230var. *rhombifolia* 230*macrosperma* 227var. *demissa* 227" *matura* 227" *pentandra* 227*matura* 227*modesta* 226*monogyna* 225*monstrata* 228*Napaea* 228*neo-londinensis* 230*Oxyacantha* 225*pedicellata* 230*pellucida* 231*pentandra* 227*Pequotorum* 229*polita* 230*Porteri* 229*premora* 226*Pringlei* 229var. *lobulata* 229*pruinosa* 228forma *dissona* 228var. *conjuncta* 228" *latisepala* 228" *Porteri* 229*punctata* 226*quinebaugensis* 229

Crataegus

- rhombofolia* 230
- rotundifolia* 227
- scabrida* 230
- sejuncta* 230
- spatiosa* 231
- Stonei* 227
- stratfordensis* 231
- tenella* 227
- tomentosa* 426
- umbratilis* 226
- viridimontana* 228

Crawley Root 135**Crawling Spearwort** 185**Cream-colored Avens** 235**Creeping Buttercup** 187**Crowfoot** 187**Fern** 26**Snowberry** 312**Spearwort** 185**Speedwell** 354**Thyme** 341**Crepis** 412*capillaris* 412*rigida* 413, 432*setosa* 413*taraxacifolia* 413, 432*tectorum* 412*virens* 412var. *dentata* 412**Cress****Bank** 205**Bastard** 200, 201**Belle Isle** 208**Bitter** 207, 209, 210**Brook** 210**Common Winter** 207**Cow** 201**Creeping Yellow** 207**Early Winter** 208**Field** 201**Field Penny** 200**Garden** 201**Hairy Rock** 211" **Yellow** 207**Hoary** 421**Lamb's** 210**Cress****Land** 210**Low Rock** 210**Marsh** 207**Mouse-ear** 206**Penny** 200**Purple** 210**Rock** 210**Rocket** 207**Small Bitter** 210**Smooth Rock** 211**Spring** 209, 210**Thale** 206**Tower** 210**True Water** 206**Wall** 206, 210, 211**Water** 206**Winter** 207, 208**Yellow** 207" **Water** 207**Crimson Clover** 248**Crinkle-root** 208**Crisped Bunch-flower** 118**Cross-wort** 315**Crotalaria** 248*sagittalis* 248**Crotonopsis** 265*linearis* 265**Crowfoot** 184**Biting** 186**Bristly** 187**Bulbous** 188**Common White Water** 185**Creeping** 187**Cursed** 186**Ditch** 186**Early** 187**Hooked** 186**Kidney-leaved** 186**Marsh** 186, 187**Meadow** 188**Mountain** 186**Rock** 186**Rough** 186**Sanicle-leaved** 186**Seaside** 185**Small-flowered** 186

- Crowfoot
 Smooth 186
 Spotted-leaf 187
 Stiff Water 184
 Swamp 187
 Tall 188
 Tufted 187
 White Water 184
 Wood 187
 Yellow Water 185
 Crowfoot Family 184
 Grass 50
 Crown Vetch 252
 Cruciferae 199, 437, 440
 Cryptogramma 19
 acrostichoides 424
 Stelleri 19, 424
 Cryptotaenia 300
 canadensis 300
 Cuckoo Flower 210
 Cucumber 371
 One-seeded Bur 372
 Star 372
 Wild 372
 Cucumber-root
 Indian 124
 Cucumis 371
 Melo 371, 432
 sativus 371, 432
 Cucurbita 372
 maxima 372, 432
 moschata 372, 432
 Pepo 372, 432
 var. *condensa* 372, 432
 Cucurbitaceae 371, 438
 Cudweed 389, 390
 Low 390
 Purplish 390
 Culver's Physic 353
 Culver's-root 353
 Cup Plant 390
 Cuphea 290
 petiolata 290
 viscosissima 290
 Cuphea 290
 Clammy 290
 Curled Dock 158
 Curled
 Mallow 279
 Mint 343
 Mustard 203
 Thistle 405
 Curly Dock 158
 Grass Family 26
 Currant 217
 Black 218
 Buffalo 219
 Clove 219
 European Black 218
 Fetid 219
 Flowering 218, 219
 Garden Black 218
 " Red 219
 Golden 219
 Indian 366
 Missouri 219
 Mountain 219
 Red 219
 Skunk 219
 Swamp Black 218
 Sweet 219
 Wild Black 218
 Wine 219
 Cursed Crowfoot 186
 Cuscuta 325
 arvensis 325
 cephalanthi 428
 compacta 326
 Coryli 325
 Epithymum 325
 Gronovii 326
 inflexa 325
 tenuiflora 428
 Cut Grass 58
 Cut-leaved Blackberry 238
 Cranesbill 262
 Geranium 262
 Pepper-root 209
 Toothwort 209
 Cycloloma 165
 atriplicifolium 165, 420, 433
 platyphyllum 165
 Cydonia 224
 japonica 224

- Cydonia
 vulgaris 224
 Cymbalaria
 Cymbalaria 350
 Cynanchum 323
 nigrum 323
 Cynodon 69
 Dactylon 69, 431
 Cynoglossum 327
 boreale 328
 officinale 327
 virginicum 328
 Cynosurus 72
 cristatus 72, 417
 Cynthia 408
 Cyperaceae 81, 436
 Cyperus 81, 441
 aristatus 82
 dentatus 82
 diandrus 81
 var. castaneus 81
 erythrorhizos 82
 var. pumilus 82
 esculentus 82
 var. angustispicatus 82
 " *leptostachyus* 82
 ferax 82
 filiculmis 83, 425
 var. macilentus 83
 fuscus 82, 431
 Grayii 83
 Houghtonii 425
 inflexus 82
 Nuttallii 82
 rivularis 81
 speciosus 82
 strigosus 83
 var. capitatus 83
 " *robustior* 83
 Cypress 37
 Mock 165
 Cypress Spurge 267
 Cypridium 129
 acaule 129
 arietinum 425
 candidum 425
 hirsutum 129
 Cypridium
 parviflorum 129
 var. pubescens 129
 pubescens 129
 reginae 129
 spectabile 129
 Cystopteris 24
 bulbifera 24
 fragilis 24
 Cytisus 248
 scoparius 248, 431
 Dactylis 72
 glomerata 72
 Daffodil 126
 Daisy
 Ox-eye 400
 White 400
 Yellow 393
 Daisy Fleabane 387
 Dalibarda 240
 repens 240
 Damask Violet 206
 Dame's Rocket 206
 " Violet 206
 Damson 244
 Dandelion 410
 Common 410
 Dwarf 408
 Fall 409
 Red-seeded 410
 Dangleberry 312
 Danthonia 67
 compressa 67
 sericea 425
 spicata 67
 Darnel 78
 Bearded 78
 Common 78
 Dasiphora
 fruticosa 233
 Dasystema
 flava 355
 pedicularia 355
 virginica 355
 Datura 347
 Metel 348, 434
 meteloides 348, 432

- Datura*
 Stramonium 347
 Tatula 348
Daucus 303
 Carota 303
Day Lily 119, 120
Day-blooming Campion 178
 Lychnis 178
Day-flower 113
Dead Nettle 336
Decodon 289
 verticillatus 289
Deerberry 313
Deergrass 290
Deer-tongue Grass 55
Deerwood 146
Delphinium 192
 Ajaxis 192
 Consolida 192
Dennstaedtia
 punctilobula 25
Dentaria 208
 anomala 209
 diphylla 208
 incisa 209
 incisifolia 209
 laciniata 209
 maxima 209
Deptford Pink 181
Deringa
 canadensis 300
Deschampsia 67
 caespitosa 67
 flexuosa 67
Desmodium 252, 441
 acuminatum 252
 bracteosum 253
 canadense 253
 canescens 252
 ciliare 254
 cuspidatum 253
 Dillenii 253
 glabellum 252
 grandiflorum 252
 humifusum 252
 marilandicum 254
 nudiflorum 252
 Desmodium
 obtusum 254
 paniculatum 253
 rigidum 253
 rotundifolium 252
 sessilifolium 253
 strictum 426
Deutzia 217
 scabra 217, 433
Devil's Apple 194
 Bit 118, 377
 Fig 197
 Hair 190
 Paint-brush 414
 Walking-stick 296
Dew Grass 64
Dewberry 239
Dew-plant 213
Dianthus 181
 Armeria 181
 barbatus 181
 deltoides 181
 plumarius 181
Dicentra 198
 canadensis 198
 Cucullaria 198
Dicksonia 25
 pilosiuscula 25
 punctilobula 25
 forma cristata 25
 " *schizophylla* 25
Diervilla 365
 Diervilla 365
 Lonicera 365
 trifida 365
Digitalis 353
 purpurea 353, 434
Digitaria 49
 filiformis 49
 humifusa 49
 sanguinalis 50
Dill 302
Diodia 363
 teres 363
Dioscorea 126
 villosa 126
Dioscoreaceae 126, 436

- Diospyros 317
 virginiana 317
Diplachne
 fascicularis 69
Diplopappus
 amygdalinus 429
Diplotaxis 204
 muralis 204, 433
 tenuifolia 204
 Dipsacaceae 370, 438, 441
Dipsacus 370
 sylvestris 370
Dirca 289
 palustris 289
Discopleura
 capillacea 299
 Dish Mustard 200
Distichlis 72
 maritima 72
 spicata 72
 Ditch Crowfoot 186
 Grass 44
 Moss 47
 Stonecrop 214
 Dock 157
 Belleville 159
 Bitter 159
 Blunt-leaved 159
 Broad 159
 Curled 158
 Curly 158
 Great Water 158
 Horse 158
 Narrow 158
 Pale 158
 Patience 157
 Peach-leaved 158
 Sorrel 159
 Spring 157
 Swamp 158
 Tall 158
 Velvet 349
 Yellow 158
 Dock-leaved *Persicaria* 160
 Dockmackie 368
 Dodder 325, 326
 Clover 325
 Dodder
 Field 325
 Hazel 325
Doellingeria
 infrma 386
 umbellata 386
 Dog Fennel 398
 Grass 79
 Rose 242
 Violet 288
 Dogbane 321
 Spreading 321
 Dogbane Family 321
 Dogberry 217, 223, 305
 Dog's Couch Grass 79
 Dog's Wheat Grass 79
 Dog's-tail Grass 72
 Dog's-tooth Violet 121
 Dogwood 304
 Flowering 304
 Poison 268
 Red-osier 305
 Round-leaved 304
 Swamp 305
 Dogwood Family 304
 Dolphin Flower 192
Dondia
 americana 169
 maritima 168
 Doorweed 160
 Dove's-foot Cranesbill 262
 Geranium 262
 Downy Arrow-wood 368
 Bergamot 338
 Cinquefoil 233
 Poplar 142
 Yellow Foxglove 355
 " Violet 288
Draba 199
 caroliniana 199
 verna 199
Dracocephalum 335
 parviflorum 335
 Dragon
 Green 110
 Dragon Arum 109
 Head 335

- Dragon
 - Root 110
- Dragon's Claw 135
- Drooping Avens 235
- Drop-seed 62, 63
- Drop-seed Grass 61
- Dropwort 235
- Drosera 213
 - intermedia* 213
 - var. *americana* 213
 - longifolia* 213
 - rotundifolia* 213
- Droseraceae 213, 437
- Dry Strawberry 232
- Drymocallis*
 - arguta* 232
- Dryopteris*
 - acrostichoides* 21
 - var. *Schweinitzii* 21
 - aculeata Braunii* 424
 - Boottii* 23
 - cristata* 23
 - var. *Clintoniana* 23
 - Goldiana* 22
 - marginalis* 22
 - noveboracensis* 22
 - simulata* 22
 - spinulosa* 23
 - var. *dilatata* 24
 - " *intermedia* 23
 - Thelypteris* 22
- Duchesnea 232
 - indica* 232
- Duck Acorn 184
 - Grass 73
- Duck's-foot 194
- Duck's-meat 111
- Duckweed 111
 - Greater 111
 - Lesser 112
- Duckweed Family 111
- Dulichium 83
 - arundinaceum* 83
 - spathaceum* 83
- Dumb Watches 213
- Durfee Grass 79
- Dusty Miller 177, 401
- Dutch Flax 201, 202
 - Myrtle 143
- Dutchman's Breeches 198
- Dwarf Alder 275
 - Blueberry 313
 - Cherry 245
 - Cornel 304
 - Dandelion 408
 - Ginseng 296
 - Huckleberry 312
 - Mallow 279
 - Mistletoe 156
 - Nettle 155
 - Raspberry 237
 - St. John's-wort 281
 - Sumach 268
- Dyer's Rocket 212
 - Weed 212
 - Weld 212
- Early Buttercup 187
 - Coral Root 135
 - Crowfoot 187
 - Meadow Rue 188
 - Saxifrage 215
 - Sweet Blueberry 313
 - Yellow Violet 287
- Easter Bell 176
- Eatonia*
 - Dudleyi* 66
 - nitida* 66
 - obtusata* 66
 - pennsylvanica* 66
 - var. *major* 66
- Ebenaceae 317, 438
- Ebony Family 317
 - Spleenwort 20
- Echinacea*
 - angustifolia* 393
- Echinochloa 56
 - crusgalli* 56
 - frumentacea* 56, 433
 - Walteri* 56
- Echinocystis 372
 - lobata* 372
- Echinospermum*
 - Lappula* 328
 - virginicum* 328

Echium 330
 vulgare 330
 Eel Grass 45, 47
 Eglantine 242
 Eichhornia 114
 crassipes 114, 430
 Elatinaceae 282, 438
 Elatine 282
 americana 282
Elatinoides
 Elatine 350
 Elder 369
 Black-berried 369
 Box 273
 Common 369
 Marsh 391
 Poison 268
 Red-berried 369
 Wild 296
 Elecampane 390
 Eleocharis 83, 441
 acicularis 84
 diandra 84, 417
 Engelmanni 84
 intermedia 85, 418
 microcarpa 85
 mutata 83
 obtusata 84
 olivacea 83
 ovata 84, 418
 palustris 84
 var. *glaucescens* 84
 " *major* 84
 " *vicens* 84
 pygmaea 85
 quadrangulata 83
 Robbinsii 83
 rostellata 85
 tenuis 85
 Torreyana 85
 tuberculosa 84
 Eleusine 69
 indica 69
 Ellisia 327
 Nyctelea 327, 434
 Elm 152

Elm
 American 152
 Common 152
 English 152
 European 152
 False 153
 Feathered 152
 Indian 152
 Moose 152
 Red 152
 Rock 152
 Shade 152
 Slippery 152
 Swamp 152
 Sweet 152
 Tawny 152
 Wahoo 153
 Water 152
 Weeping 152
 White 152
 Winged 153
 Witch 153
 Elodea 47
 campanulata 282
 canadensis 47
 Elymus 80
 australis 80, 423
 brachystachys 417, 433
 canadensis 80
 var. *glaucifolius* 81
 hirsutiglumis 80
 striatus 81
 virginicus 80
 var. *hirsutiglumis* 80
 Enchanter's Nightshade 294
 English Elm 152
 Hawthorn 225
 Meadow-sweet 235
 Plantain 361
 Violet 287
 Epifagus 359
 virginiana 359
 Epigaea 311
 repens 311
 Epilobium 291
 adenocaulon 292, 422, 427

Epilobium

- angustifolium 291
- coloratum 292
- densum 291
- Hornemanni* 427
- lineare 292
- molle 291
- palustre 292
 - var. monticola 292
- strictum 291

Epipactis 134

- pubescens 135
- repens
 - var. ophioides 134
- tesselata 134

Equisetaceae 29, 436**Equisetum** 29

- arvense 29
- fluviatile 29
- hyemale 30
 - var. affine 30
 - " intermedium 29
- limosum 29
- palustre 29
- pratense 29
- scirpoides 30
- sylvaticum 29
- variegatum 30
 - var. Jesupi 30

Eragrostis 71

- capillaris 71
- Frankii 71
- hypnoides 71
- major 71
- megastachya 71
- minor 71
- pectinacea 71
- pilosa 71
- Purshii* 71
- reptans 71

Eragrostis

- Purple 71

Erechtites 403

- hieracifolia 403
- praealta* 403

Erect Bugle 332**Erect**

- Goose Grass 160
- Knotweed 160
- Ericaceae 306, 438
- Erigeron 387
 - annuus 387
 - bellidifolius 387
 - canadensis 387
 - philadelphicus 387
 - pulchellus 387
 - ramosus 387
 - var. discoideus 387
 - strigosus 387

Eriocaulaceae 112, 436**Eriocaulon** 112

- septangulare 112

Eriophorum 89

- alpinum 86
- callitrix 89
- cyperinum 88
 - var. laxum 89
- gracile 89
- lineatum 88
- paucinervium 89
- polystachyon 90
 - var. latifolium 90
- tenellum 89
- vaginatum 89
- virginicum 90
 - var. album 90
- viridi-carinatum 90

Erodium 262

- cicutarium 262, 434
- moschatum 262, 434

Erodium

- Musk 262

Ervum

- Lens* 256

Eryngium 297

- aquaticum 297
- planum 297, 434
- yuccifolium 297

Eryngo 297**Erysimum** 206

- cheiranthoides 206

Erythronium 121

- Erythronium
 americanum 121
 Eschscholtzia 196
 californica 196, 421, 433
 Estragon 401
 Eupatorium 375
 ageratoides 376
 aromaticum 377
 hyssopifolium 375
 maculatum 375
 var. *amoenum* 375
 perfoliatum 376
 var. *truncatum* 376
 pubescens 376
 purpureum 375
 var. *amoenum* 375
 " *maculatum* 375
 rotundifolium
 var. *ovatum* 376
 sessilifolium 376
 teucrifolium 376
 urticaefolium 376
 verbenaefolium 376
 Euphorbia 265, 441
 corollata 266
 Cyparissias 267
 dentata 426
 Esula 266
 glyptosperma 426
 hirsuta 266
 Ipecacuanhae 266, 423
 Lathyrus 267
 maculata 266
 marginata 266
 nutans 265
 Peplus 267
 polygonifolia 265
 Preslii 265
 Euphorbiaceae 265, 437, 440
 European Barberry 195
 Columbine 192
 Elm 152
 Fly Honeysuckle 365
 Garden Bean 256
 Gooseberry 218
 Larch 35
 European
 Linden 277
 Mallow 279
 Millet 51
 Mountain Ash 223
 Spindle Tree 271
 Vervain 330
 Wood Strawberry 231
 Euthamia
 caroliniana 381
 graminifolia 381
 tenuifolia 381
 Evening Lychnis 178
 Primrose 292
 Primrose Family 291
 Ever-blooming Lychnis 178
 Evergreen Blackberry 238
 Everlasting 388, 389, 390
 Common 390
 Pearly 389
 Plantain-leaved 389
 Sweet 390
 Everlasting Pea 257
 Evonymus 271
 alatus 271
 atropurpureus 271
 europaeus 271
 Fagaceae 148, 436
 Fagopyrum 164
 esculentum 164, 431
 Fagopyrum 164
 Fagus 148
 americana 148
 ferruginea 148
 grandifolia 148
 Fairy Creeper 197
 Cup 216
 Faitour's Grass 266
 Falcata
 comosa 259
 Pitcheri 259
 Fall Dandelion 409
 False Acacia 251
 Beech-drops 307
 Coltsfoot '157
 Dragon Head 335

False

- Elm 153
- Flax 201, 202
- Foxglove 355
- Gromwell 330
- Heather 283
- Hellebore 118
- Indigo 247, 251
- Loosestrife 291
- Mermaid 268
- " Family 268
- Miterwort 215
- Mustard 211
- Nettle 156
- Pimpernel 352
- Red Top 73
- Rice 58
- Sarsaparilla 296
- Solomon's Seal 122
- Spikenard 122
- Sycamore 220
- Unicorn-root 125
- Feather Geranium 165
- Grass 60
- Hyacinth 121
- Feathered Columbine 188
- Elm 152
- Featherfoil 315
- American 315
- Felon-herb 401
- Fen Orchis 136
- Fennel 301
- Common 301
- Dog 398
- Garden 301
- Fennel Flower 191
- Fern
- Beech 17
- Bladder 24
- Broad Beech 17
- " Shield 24
- Chain 19
- Christmas 21
- Cinnamon 27
- Climbing 26
- Clinton's Shield 23

Fern

- Creeping 26
- Crested Shield 23
- Flowering 26
- Goldie's 22
- Grape 27
- Hairy Lip 18
- Hartford 26
- Hay-scented 25
- Interrupted 26
- Lady 21
- Long Beech 17
- Marginal Shield 22
- Marsh 22
- Massachusetts 22
- Net-veined Chain 19
- New York 22
- Oak 17
- Ostrich 25
- Rattlesnake 28
- Royal 26
- Sensitive 25
- Shield 22
- Spinulose Shield 23
- Sweet 144
- Virginia Chain 19
- Walking 21
- Wood 22
- Fern Family 17
- Fescue
- Meadow 76
- Sheep's 76
- Slender 76
- Taller 76
- Fescue Grass 76
- Festuca 76
- capillata* 76
- elatior* 76
- var. *pratensis* 76
- nutans* 76
- octoflora* 76
- ovina* 76
- var. *capillata* 76
- " *duriuscula* 425
- rubra* 76, 425
- tenella* 76

Fetid Chamomile 398

 Currant 219

 Horehound 336

Fetter Bush 309

Fever Bush 196

Feverfew 400

Feverwort 367

Field Avens 235

 Bean 258

 Bindweed 325

 Chickweed 176

 Cress 201

 Dodder 325

 Garlic 119

 Kale 203

 Larkspur 192

 Mint 343

 Pansy 288

 Pea 258

 Poppy 197

 Scabious 371

 Soapwort 180

 Sorrel 159

 Spurrey 174

 Strawberry 231

 Thistle 405

Fig

 Devil's 197

 Indian 289

Figwort 351

Figwort Family 349

Filbert 146

Filipendula 234

 hexapetala 235, 434

 rubra 234

 Ulmaria 234

Filix

bulbifera 24

fragilis 24

Fimbristylis 85

autumnalis 85

capillaris 85

Frankii 85

Fine Bent 64

 Snakeroot 157

Finger Grass 49, 50

Fiorin 64

Fir 37

 Balm-of-Gilead 37

 Balsam 37

 Scotch 35

Fire Cherry 244

Fire Plant

 Mexican 165

Fire Pink 179

Fireweed 291, 403

Fit-root 307

Five-finger 232, 234

 Marsh 233

 Mountain 233

 Purple 233

 Three-toothed 233

Flag

 Blue 127

 Cat-tail 39

 Larger Blue 127

 Poison 127

 Slender Blue 127

 Sweet 111

Flannel-leaf 349

Flax 259

 Common 259

 Dutch 201, 202

 False 201, 202

 Wild Yellow 260

Flax Family 259

Fleabane 387

 Canada 387

 Daisy 387

 Marsh 388

 Salt Marsh 388

Fleur-de-lis 127

Flixweed 206

Floating Foxtail 62

 Heart 320

Floerkea 268

proserpinacoides 268

Flowering Currant 218, 219

 Dogwood 304

 Fern 26

 " Family 26

 Locust 251

 Maple 278

 Spurge 266

- Flowering
 Thistle 197
 Wintergreen 263
 Flower-of-an-Hour 280
 Fly-away Grass 64
 Foam-flower 215
 Foeniculum 301
 Foeniculum 301
 officinale 301
 vulgare 301
 Fool's Parsley 302
 Forget-me-not 329
 True 329
 Wild 329
 Forked Catchfly 179
 Chickweed 172
 Forsythia 318
 viridissima 318, 434
 Four-leaved Campion 180
 Four-o'clock 171
 Four-o'clock Family 171
 Fowl Meadow Grass 73, 74
 Fox Grape 276
 Foxglove 353
 Common 353
 Downy False 355
 " Yellow 355
 Oak-leaved False 355
 Smooth False 355
 Foxtail 57
 Floating 62
 Green 57
 Marsh 62
 Meadow 62
 Water 62
 Foxtail Grass 62
 Fragaria 231
 americana 232
 canadensis 231
 indica 232
 terrae-novae 231
 vesca 231
 var. *alba* 232
 " *americana* 232
 virginiana 231
 var. *Grayana* 231
 " *illinoensis* 231
 Fragrant Balm 338
 Fraxinus 317
 americana 317
 Darlingtonii 317
 excelsior 318
 lanceolata 318
 nigra 318
 pennsylvanica 317
 var. *lanceolata* 318
 pubescens 317
 sambucifolia 318
 viridis 318
 French Pink 181
 Purslane 182
 Rose 243
 Fringe Cup 216
 Fringed Gentian 319
 Loosestrife 316
 Orchis 130
 Polygala 263
 Frog Grass 114, 168
 Lily 183
 Frog's Bit Family 47
 Frost Grape 277
 Frost-flower 382
 Frostweed 282
 Fumaria 198
 officinalis 198
 Fumariaceae 197, 437, 440
 Fumitory 198
 Climbing 197
 Common 198
 Hedge 198
 Fumitory Family 197
 Funkia
 lancifolia 120
 ovata 119
 Galeopsis 335
 Ladanum 335, 434
 Tetrahit 335
 Galeorchis
 spectabilis 130
 Galingale 81
 Galinsoga 397
 parviflora 397
 var. *hispida* 397
 Galium 361, 441

Galium

- Aparine 361
 - asprellum 363
 - boreale 362
 - circaezans 362
 - Claytoni 363
 - erectum 363
 - labradoricum 363
 - lanceolatum 362
 - Mollugo 362
 - palustre 363
 - pilosum 362
 - var. punctulosum 362
 - tinctorium 363
 - var. *labradoricum* 363
 - trifidum 363
 - var. *latifolium* 363
 - " *pusillum* 363
 - triflorum 363
 - verum 362
 - Wirtgenii 362, 435
- Gall-of-the-Earth 413
- Gama Grass 48
- Garden Asparagus 122
- Black Currant 218
 - Burnet 241
 - Catchfly 179
 - Chamomile 399
 - Columbine 192
 - Cress 201
 - Fennel 301
 - Gooseberry 218
 - Heliotrope 370
 - Huckleberry 345
 - Larkspur 192
 - Mignonette 212
 - Orpine 214
 - Parsley 300
 - Patience 157
 - Pea 257
 - Peppergrass 201
 - Phlox 326
 - Pink 181
 - Plum 246
 - Poppy 197
 - Portulaca 182
 - Purslane 182

Garden

- Radish 202
 - Red Currant 219
 - Sage 337
 - Sorrel 159
 - Valerian 370
- Garget 171
- Garlic 119
- Field 119
 - Hedge 205
 - Meadow 119
 - Wild 119
- Garlic Mustard 205
- Gaultheria 311
- procumbens 311
- Gaura 294
- biennis 294
- Gaylussacia 312
- baccata 312
 - forma glaucocarpa 312
 - dumosa 312
 - frondosa 312
 - resinosa 312
- Gemmingia
- chinensis 128
- Gentian 319
- Bottle 320
 - Closed 320
 - Fringed 319
 - Horse 367
- Gentian Family 319
- Gentiana 319
- Amarella* 427
 - Andrewsii 320, 428
 - crinita 319
 - quinquefolia 319, 427
 - quinqueflora 319
 - Saponaria* 428
- Gentianaceae 319, 438
- Geraniaceae 261, 437, 440
- Geranium 261
- carolinianum 261
 - dissectum 262, 431
 - maculatum 261
 - molle 262, 434
 - pratense 261, 434
 - pusillum 262

- Geranium
 Robertianum 261
 Geranium
 Cut-leaved 262
 Dove's-foot 262
 Feather 165
 Meadow 261
 Mint 400
 Small-flowered 262
 Geranium Family 261
 Gerardia 355
 Besseyana 356
 flava 355
 Gattingeri 356
 linifolia 429
 maritima 356
 parvifolia 356
 paupercula 356
 pedicularia 355
 purpurea 355
 var. *paupercula* 356
 quercifolia 355
 Skinneriana 356
 tenuifolia 356
 var. *macrophylla* 356
 virginica 355
 Gerardia 355, 356
 Purple 355
 Seaside 356
 German Chamomile 399
 Millet 57
 Germander 332
 American 332
 Coast 332
 Geum 235
 album 235
 canadense 235
 flavum 235
 macrophyllum 426
 rivale 235
 strictum 235, 426
 virginianum 235
 Ghost-flower 307
 Giant Hyssop 334
 Solomon's Seal 123
 Gill 334
 Gill-over-the-Ground 334
 Ginger
 Wild 157
 Ginger-root
 Wild 157
 Ginseng 296
 Dwarf 296
 Ginseng Family 295
 Gipsy Combs 370
 Girls-and-Boys 198
 Glasswort 168
 Woody 168
 Glaucous Willow 139
Glecoma
 hederacea 334
 Gleditsia 246
 triacanthos 246
 Globeflower 191, 236
 American 191
 Spreading 191
 Swamp 191
 Wild 191
 Glossy Willow 138
 Glyceria 74
 acutiflora 75
 borealis 75
 canadensis 74
 elongata 74
 fluitans 75
 grandis 74
 nervata 74
 obtusa 74
 pallida 74
 septentrionalis 75
 Torreyana 74
 Glycyrrhiza 252
 lepidota 252, 431
 Gnaphalium 389
 decurrens 390
 obtusifolium 389
 polycephalum 389
 purpureum 390
 uliginosum 390
 Goat's Beard 410
 Rue 251
 Gold-cups 188
 Golden Alexanders 300
 Aster 377

- Golden
 Bell 318
 Chain 214
 Club 111
 Currant 219
 Glow 393
 Loosestrife 315
 Marguerite 399
 Meadow Parsnip 300
 Moss 214
 Osier 143
 Peppergrass 201
 Ragweed 404
 Ragwort 404
 Saxifrage 216
 Seal 193
 Golden-rod 378, 380, 381
 Sweet 379
 White 378
 Golden-tuft 200
 Golden-Wonder Millet 57
 Goldie's Fern 22
 Gold-of-Pleasure 201, 202
 Goldthread 191
Goodyera
 pubescens 135
 repens 134
 tesselata 134
 Goose Grass 69, 72, 75, 160, 361
 Gooseberry 217
 Common 218
 European 218
 Garden 218
 Missouri 217
 Northern 218
 Prickly 217
 Smooth 218
 Swamp 218
 Wild 218
 Goosefoot 165
 City 167
 Coast 166
 Maple-leaved 166
 Nettle-leaved 167
 Oak-leaved 166
 Red 166
 Seaside 169
 Upright 167
 White 166
 Goosefoot Family 165
 Goshen Hardhack 233
 Go-to-Bed-Noon 121
 Gourd 372
 Gourd Family 371
 Goutweed 299
 Goutwort 299
 Gowan
 Meadow 191
 Gramineae 48, 436, 439
 Grape 276
 Blue 277
 Bunch 276
 Fox 276
 Frost 277
 Northern Fox 276
 Pigeon 276
 River-bank 277
 Skunk 276
 Summer 276, 277
 Wolf 345
 Grape Fern 27
 Hyacinth 121
 Grass
 Alkali 72
 Arrow 45
 Awned Wheat 79
 Barnyard 56
 Beach 65
 Bear 121
 Beard 48, 65
 Bent 64
 Bermuda 69
 Billion-Dollar 56
 Black 114
 Black Oat 60
 Blue-eyed 128
 Blue-joint 65
 Bottle 57
 Bottle-brush 81
 Bristly Foxtail 57
 Brome 76
 Broom Beard 48
 Brown Bent 64

Grass

Bull 68
 Bunch 48
 Bur 58
 Canada Blue 73
 Canary 58
 Cat-tail 62
 Coast Knot 164
 Cocksfoot 56
 Cockspur 56
 Common Hair 67
 Cord 68
 Corn 55, 56
 Cotton 90
 Couch 79
 Crab 50, 61, 69, 160, 168
 Creeping Spear 73
 Crowfoot 50
 Cut 58
 Deer-tongue 55
 Dew 64
 Ditch 44
 Dog 79
 Dog's Couch 79
 Dog's Wheat 79
 Dog's-tail 72
 Drop-seed 61
 Duck 73
 Durfee 79
 Eel 45, 47
 Erect Goose 160
 Faitour's 266
 Fall Witch 50
 Feather 60
 Fescue 76
 Finger 49, 50
 Flat-stemmed Blue 73
 Floating Manna 75
 Fly-away 64
 Forked Beard 48
 Fowl Meadow 73, 74
 Foxtail 62
 Frog 114, 168
 Gama 48
 German Knot 172
 Goose 69, 72, 75, 160, 361
 Green Eel 185

Grass

Hair 62, 64, 71
 Hairy Brome 77
 Hedgehog 58
 Herd's 62
 Holy 59
 Hungarian 57
 " Brome 78
 Indian 49
 Italian Ray 78
 " Rye 78
 Japanese Barnyard 56
 Johnson 49
 June 73
 Kentucky Blue 73
 Knot 79, 160
 Knot-root 61
 Large Crab 50
 Low Spear 72
 Lyme 80
 Manna 74
 Marsh 68
 Meadow 72
 " Spear 74
 Melic 72
 Mesquite 69
 Needle 60
 Oat 67
 Old-witch 51
 Orange 282
 Orchard 72
 Pale Manna 74
 Panic 51
 Pearl 74
 Perennial Foxtail 57
 " Ray 78
 " Rye 78
 Pigeon 57
 Porcupine 60
 Poverty 283
 Quack 79
 Quaking 72
 Quitch 79
 Rattlesnake 74
 Reed Bent 65
 " Canary 59
 " Meadow 74

Grass

Rib 361
 Ribbon 59
 Rice Cut 58
 Ripple 361
 Rough Foxtail 57
 " Hair 64
 Rough-stalked Meadow 73
 Rush 63
 Salt Marsh 68
 " Meadow 68
 " Reed 68
 Sand 70
 " Knot 164
 Scorpion 329
 Scratch 58, 163
 Scurvy 208
 Scutch 69, 79
 Sea Spear 75
 Seaside Knot 164
 Seneca 59
 Sesame 48
 Shave 30
 Shear 79
 Sickle 163
 Silk 64
 Slough 68
 Small Crab 49
 Smooth Meadow 73
 Snake 71
 Sour 159
 Spear 72, 73
 Spike 72
 Spires 59
 Squirrel-tail 80
 Star 125, 127
 Stink 71
 Swamp Wire 73
 Sweet Vernal 59
 Switch 52
 Sword 59, 98
 Tall Manna 74
 " Marsh 68
 " Oat 67
 " Panic 52
 " Quaking 74
 Tape 47

Grass

Terrell 80
 Thatch 68
 Thin 64
 Tickle 51
 Toad 114
 Tongue 176, 200
 Triple-awned 60
 Tufted Hair 67
 Twitch 57
 Vanilla 59
 Velvet 66
 Vernal Whitlow 199
 Water Star 114
 Way 160
 White 58
 " Bent 64
 Whitlow 199
 Wild Oat 67
 Wire 48, 69, 73, 160
 Wood 49
 " Reed 65
 Wool 88
 Yard 69
 Yellow-eyed 112, 127
 Grass Family 48
 Grass of Parnassus 216
 Grass Pink 133, 181
 Wrack 45
 Gratiola 353
 aurea 353
 dubia 353
 virginiana 353
 Gravel Chickweed 172
 Gravel-root 375
 Gravel-weed 330
 Gray Birch 147
 Willow 141
 Greaseweed 357
 Great American Burnet 241
 Blue Lobelia 374
 Bulrush 86
 Burdock 404
 Laurel 308
 Nettle 155
 Ragweed 391
 St. John's-wort 280

- Great
 Solomon's Seal 123
 Water Dock 158
 Willow-herb 291
 Greater Bladderwort 358
 Duckweed 111
 Starwort 176
 Stitchwort 176
 Greek Valerian 327
 Green Adder's Mouth 136
 Amaranth 169
 Ash 318
 Brier 125
 Dragon 110
 Foxtail 57
 Hellebore 118
 Milkweed 323
 Grim the Collier 414
 Grindelia 377
 squarrosa 377, 435
 Griottes 245
 Gromwell 329
 Common 330
 Corn 329
 False 330
 Ground Cherry 346
 Hemlock 34
 Honeysuckle 250
 Ivy 334
 Laurel 311
 Pine 31
 Pink 326
 Groundnut 258, 296
 Groundsel 403
 Common 403
 Groundsel Tree 388
 Gum
 Black 305
 Red 220
 Sour 305
 Star-leaved 220
 Sweet 220
 Gum Tree
 Sweet 220
 Gumbo 280
 Gum-plant 377

Gymnadeniopsis
 clavellata 131
Gypsophila 181
 elegans 181, 433
 muralis 181, 433
Gypsophyll 181
Gyrostachys
 cernua 134
 gracilis 133
 linearis 133
 ochroleuca 134
 plantaginea 134
 praecox 133
 simplex 133
 stricta 134
Gyrotheca
 capitata 126
 tinctoria 126
Habenaria 130, 441
 blephariglottis 131
 bracteata 130
 ciliaris 131
 clavellata 131
 dilatata 130
 fimbriata 132
 flava 130
 grandiflora 132
 Hookeri 131
 var. *oblongifolia* 131
 hyperborea 130
 lacera 132
 macrophylla 131
 orbiculata 131, 419
 peramoena 425
 psycodes 132
 rotundifolia 425
 tridentata 131
 virescens 130
 Hackberry 153
 Hackmatack 35
 Haemodoraceae 126, 436
 Hair Grass 62, 64, 71
 Hairy Agrimony 240
 Hawkweed 415
 Lip Fern 18
 Pinweed 283
 Solomon's Seal 123

Hairy
 Tare 256
 Vetch 256
 Halberd-leaved Tear-thumb 163
 Haloragidaceae 294, 438
 Hamamelidaceae 219, 437
 Hamamelis 219
 virginiana 219
 Hardhack 221, 233, 365
 Goshen 233
 Purple 221
 Hardheads 407
 Harebell 373
 Hare's Tail 89
 Hare's-ear 204
 Hare's-ear Mustard 204
 Hartford Fern 26
 Haw
 Black 369
 Red 225
 Haw Bush 225
 Tree 225
 Hawkbit 409
 Hawk's-beard 412
 Hawkweed 414
 Canada 415
 Hairy 415
 Orange 414
 Hawthorn 225
 English 225
 Hay-scented Fern 25
 Hazel 146
 Hazel Dodder 325
 Hazelnut 146
 Beaked 146
 Wild 146
 Headache 197
 Headache Plant 356
 Heal-all
 Common 335
 Heart Snakeroot 157
 Heart-leaved Willow 139
 Heart's-ease 162, 284, 288
 Heart-seed 274
 Heartweed 162
 Heath Family 306

Heather
 False 283
 Hedeoma 339
 hispidula 339
 pulegioides 339
 Hedge Bindweed 163, 325
 Fumitory 198
 Garlic 205
 Hyssop 353
 Mustard 205
 Nettle 337
 Pink 180
 Thorn 225
 Hedgehog Grass 58
 Helenium 398
 autumnale 398
 nudiflorum 398
 tenuifolium 398
 Helianthemum 282
 canadense 282
 corymbosum 427
 majus 282
 Helianthus 394, 441
 angustifolius 429
 annuus 394
 debilis 394, 435
 var. *cucumerifolius* 394, 435
 decapetalus 395
 divaricatus 395
 doronicoides 429
 giganteus 394
 var. *ambiguus* 394
 grosseserratus 394
 laetiflorus 394
 Maximiliani 395, 435
 petiolaris 394
 rigidus 394
 scaberrimus 394
 scabra 429
 strumosus 395
 var. *macrophyllus* 395
 " *mollis* 395
 trachelifolius 395, 423
 tuberosus 395
 Heliopsis 392
 helianthoides 392
 laevis 392

Heliopsis
 scabra 392, 430
Heliotrope
 Garden 370
Hellebore
 American White 118
 False 118
 Green 118
Helonias
 bullata 425
Hemerocallis 120
 flava 120
 fulva 120
Hemicarpha 90
 micrantha 90
 subsquarrosa 90
Hemlock 37
 Ground 34
 Poison 298
 Water 299
Hemlock Parsley 303
Hemp 153
 Albany 155
 American 321
 Canadian 321
 Common 153
 Indian 321
 Salt Marsh Water 171
 Water 171
Hemp Nettle 335
Hemp-weed
 Climbing 377
Hen-and-Chickens 215
Henbane 422
 Black 422
Henbit 336
Hepatica 189
 acuta 189
 acutiloba 189
 Hepatica 189
 triloba 189
Heracleum 303
 lanatum 303
Herb Bennet 235
 Gerard 299
 Patience 157
 Robert 261

Herb
 Sophia 206
Hercules' Club 296
Herd's Grass 62
Heron's-bill 262
Hesperis 206
 matronalis 206
Heteranthera 113
 dubia 114
 graminea 114
 reniformis 113
Heuchera 215
 americana 215
Hibiscus 279
 esculentus 280, 431
 Moscheutos 280
 syriacus 279
 Trionum 280
Hickory 144
 Bitter Nut 145
 Broom 145
 Little Pignut 145
 Pignut 145
 Shag-bark 145
 Shell-bark 145
 Small-fruited 145
 Swamp 145
 White-heart 145
Hickory Poplar 194
Hicoria
 alba 145
 glabra 145
 microcarpa 145
 minima 145
 ovata 144
Hieracium 414
 aurantiacum 414
 canadense 415
 floribundum 414
 Gronovii 415
 marianum 414
 paniculatum 414
 Pilosella 414
 pratense 414
 scabrum 415
 venosum 414
 var. *subcaulescens* 414

- Hierochloe 59
 borealis 59
 odorata 59
 High Angelica 303
 Mallow 279
 High-bush Blackberry 237, 239
 Blueberry 313
 Cranberry 368
 Highwater-shrub 391
 Hip Rose 242
 Hippuris
 vulgaris 427
 Hoary Alder 148
 Alyssum 199
 Cinquefoil 233
 Cress 421
 Pea 251
 Vervain 331
 Willow 140
 Hobble-bush 368
 Hog Apple 194
 Lily 183
 Peanut 259
 Hog-weed 391
 Holcus 66
 lanatus 66
 Holly 269
 American 269
 Mountain 270, 271
 Holly Family 269
 Hollyhock 278
 Holosteum
 umbellatum 426
 Holy Grass 59
 Homalocenchrus
 orysoides 58
 virginicus 58
 Honesty 208
 Honewort 300
 Honey Locust 246
 Honey-bloom 321
 Honeysuckle 192, 365
 American Fly 365
 Bush 365
 European Fly 365
 Ground 250
 Japanese 366
 Honeysuckle
 Mountain Fly 365
 Tartarian 365
 Trumpet 366
 White Swamp 307
 Wild 308, 366
 Honeysuckle Clover 249
 Honeysuckle Family 365
 Honey-sweet 235
 Hooked Crowfoot 186
 Hoop Ash 153, 318
 Hop 153
 Common 153
 Japanese 154
 Hop Clover 249
 Hornbeam 146
 Medick 250
 Tree 263
 Hordeum 80
 jubatum 80
 vulgare 80, 431
 Horehound 333
 Black 336
 Common 333
 Fetid 336
 Water 341
 Hornbeam 146
 American 146
 " Hop 146
 Hop 146
 Horned Pondweed 44
 Rush 90
 Hornwort 182
 Hornwort Family 182
 Horse Balm 344
 Brier 125
 Dock 158
 Gentian 367
 Lily 183
 Mint 338, 342
 Nettle 345
 Plum 246
 Horse-chestnut 274
 Common 274
 Horsefly-weed 247
 Horseradish 207
 Horsetail 29

- Horsetail
 Common 29
 Horsetail Family 29
 Horse-weed 387, 411
 Hosackia 250
 americana 250, 434
 Purshiana 250
 Hosta 119
 caerulea 119
 japonica 120
 Hottonia 315
 inflata 315
 Hound's Tongue 327
 Common 327
 House Sorrel 159
 Houseleek 215
 Houstonia 364
 coerulea 364
 lanceolata 364
 longifolia 364
 purpurea
 var. *calycosa* 364
 " *longifolia* 364
 Hubbard Squash 372
 Huckleberry 312
 Black 312
 Blue 312
 Common 312
 Dwarf 312
 Garden 345
 Squaw 313
 Hudsonia 283
 tomentosa 283
 Humulus 153
 japonicus 154
 Lupulus 153
 Hungarian Grass 57
 Hungry-root 296
 Huntsman's Cup 213
 Hyacinth
 Feather 121
 Grape 121
 Starch Grape 121
 Water 114
 Hydrastis 193
 canadensis 193
 Hydrocharitaceae 47, 436
 Hydrocotyle 297
 americana 298
 umbellata 297
 Hydrophyllaceae 327, 438
 Hydrophyllum 327
 virginianum 327
 Hyoscyamus 422
 niger 422, 434
 Hypericaceae 280, 438, 440
 Hypericum 280, 441
 adpressum 281
 Ascyron 280
 Bissellii 281
 boreale 281
 canadense 282
 var. *majus* 281
 " *minimum* 281
 corymbosum 281
 ellipticum 281
 gentianoides 282
 maculatum 281
 var. *subpetiolatum* 281
 majus 281
 mutilum 281
 nudicaule 282
 perforatum 280
 prolificum 281
 punctatum 281
 virginicum 282
 Hypochaeris 409
 radicata 409
 Hypopitys
 americana 307
 Hypopitys 307
 lanuginosa 307
 Hypoxis 127
 erecta 127
 hirsuta 127
 Hyssop 340
 Giant 334
 Hedge 353
 Hyssopus 340
 officinalis 340
 Hystrix 81
 Hystrix 81
 patula 81
 Iberis 201

- Iberis**
 amara 201, 433
Ilex 269
 bronxensis 270
 glabra 270
 laevigata 270
 opaca 269
 verticillata 270
 var. *padifolia* 270
 " *tenuifolia* 270
Illicioides
 mucronata 271
Illecebraceae 172, 437, 439
Ilysanthes 352
 anagallidea 353
 attenuata 352
 dubia 352, 353
 gratioloides 352
 riparia 352, 353
Impatiens 274
 aurea 274
 biflora 274
 fulva 274
 pallida 274
Indian Apple 194
 Arrow-wood 271
 Bean 359
 Chickweed 173
 Chocolate-root 235
 Corn 48
 Cucumber-root 124
 Cup 213
 Currant 366
 Elm 152
 Fig 289
 Grass 49
 Hemp 321
 Mallow 278
 Mustard 203
 Paint 193
 Pear 224
 Pipe 307
 Pitcher 213
 Plantain 403
 Poke 118
 Rice 58
 Strawberry 232
Indian
 Tobacco 374, 389
 Turmeric 193
 Turnip 109
Indigo
 Bastard 251
 False 247, 251
 Wild 247
Ink Plant
 Red 171
Inkberry 171, 270
Ink-root 314
Innocence 364
Interrupted Fern 26
Inula 390
 Helenium 390
Iodanthus 208
 pinnatifidus 208, 433
Ionactis
 linariifolius 386
Ipecac
 Wild 266
Ipecac Spurge 266
Ipomoea 324
 coccinea 324, 432
 hederacea 324
 pandurata 324
 purpurea 324
Iridaceae 127, 436, 439
Iris 127
 germanica 127
 orientalis 127
 prismatica 127
 Pseudacorus 127
 versicolor 127
Iris 127
 Yellow 127
Iris Family 127
Iron Oak 150
Ironweed 375
Ironwood 146
Ironwort 334
Isanthus
 brachiatus 428
 caeruleus 428
Isnardia
 palustris 291

- Isoëtaceae 32, 436
 Isoëtes 32
 canadensis 33 -
 Dodgei 33
 var. Robbinsii 416
 echinospora
 var. Braunii 32
 " muricata 32
 Engelmanni 33
 var. gracilis 33
 foveolata 32, 422
 Gravesii 32
 lacustris 424
 riparia
 var. *canadensis* 33
 saccharata
 var. Amesii 32
 Tuckermani 32, 424
 Isotria
 affinis 133
 verticillata 133
 Italian Clover 248
 Millet 57
 Ray Grass 78
 Rye Grass 78
 Iva 391
 frutescens 391
 oraria 391
 xanthifolia 391
 Ivory Plum 311
 Ivy
 American 276
 Coliseum 350
 Ground 334
 Kenilworth 350
 Poison 269
 Ivy-leaved Morning Glory 324
 Speedwell 355
 Ixophorus
 glaucus 57
 italicus 57
 verticillatus 57
 viridis 57
 Jack-in-the-Pulpit 109
 Jacob's Ladder 125
 Jamestown Weed 347
 Japan Quince 224
 Japanese Barnyard Millet 56
 Honeysuckle 366
 Hop 154
 Knotweed 164
 Rose 236, 242
 Jasione 373
 montana 373, 435
 Jerusalem Artichoke 395
 Cross 178
 Oak 165
 Jewelweed 274
 Jimson Weed 347, 348
 Job's Tears 113
 Wild 330
 Joe-Pye Weed 375
 Johnny-jump-up 288
 Johnson Grass 49
 Jointed Chadlock 202
 Charlock 202
 Jointweed 164
 Coast 164
 Sand 164
 Seaside 164
 Judas Tree 247
 Juglandaceae 144, 436
 Juglans 144
 cinerea 144
 nigra 144
 Juncaceae 114, 436
 Juncaginaceae 45, 436
 Juncoides
 campestre 117
 pilosum 117
 Juncus 114, 441
 acuminatus 117
 var. *debilis* 117
 articulatus 117
 var. *obtusatus* 117
 brachycarpus 116, 431
 brachycephalus 115, 419
 brevicaudatus 116
 bufonius 114
 canadensis 116
 var. *brachycephalus* 115
 " *brevicaudatus* 115
 " *coarctatus* 116
 " *longicaudatus* 116

- Juncus**
 var. *subcaudatus* 116
 debilis 117
 dichotomus 115
 var. *platyphyllus* 115
 Dudleyi 115, 419
 effusus 115
 var. *compactus* 115
 Gerardi 114
 Greenei 115
 marginatus 117
 militaris 116
 nodosus 116
 pelocarpus 116
 scirpoides 425
 secundus 115
 tenuis 114
 var. *anthelatus* 114, 419
 " *secundus* 115
 " *Williamsii* 115
 June Grass 73
 Juneberry 224
 Juniper 38
 Common 38
 Juniperus 38
 communis 38
 var. *alpina* 38
 " *canadensis* 38
 " *depressa* 38, 424
 horizontalis 424
 nana 38
 Sabina
 var. *procumbens* 424
 virginiana 38
 Kaffir Corn 49
 Kale
 Corn 203
 Field 203
 Kalmia 309
 angustifolia 309
 glauca 309
 latifolia 309
 polifolia 309
 Kedlock 203
 Kenilworth Ivy 350
 Kentucky Blue Grass 73
 Kerlock 203
 Kerria 236
 japonica 236
 Ketmia
 Bladder 280
 Kickxia
 Elatine 350
 Kidney Bean 258
 Kidney-leaved Crowfoot 186
 Kill-wart 196
 King Devil 414
 King-cups 188
 Kinnikinnik 305
 Kiss-me-over-the-Fence 162
 Kitchen Rose 242
 Kitten Breeches 198
 Knapweed 407
 Knautia 371
 arvensis 371, 435
 Knawel 172
 Knee-high Blackberry 238
 Kneiffia
 Alleni 293
 fruticosa 293
 var. *pilosella* 293
 linearis 293
 longipedicellata 293
 pratensis 293
 pumila 293
 Knight's Spur 192
 Knot Grass 79, 160
 Knot-root Grass 61
 Knotted Rush 116
 Knotweed 159, 172
 Bushy 160
 Erect 160
 Japanese 164
 Pink 161
 Shore 160
 Slender 160
 Knotwort Family 172
 Kochia 165
 Scoparia 165, 421
 Koellia
 clinopodioides 340
 flexuosa 340
 incana 341
 lanceolata 340

- Koellia*
mutica 341
pilosa 340
verticillata 341
Koniga
maritima 199
Krigia 408
amplexicaulis 408
virginica 408
Labiatae 332, 438, 440
Labrador Tea 307
Lachnanthes 126
tinctoria 126
Lacinaria
scariosa 377
Lactuca
canadensis 411
var. *integrifolia* 411
" *montana* 411
hirsuta 412
integrifolia 412
leucophaea 412
sagittifolia 412
sativa 412, 432
scariola 411
var. *integrata* 411
spicata 412
virosa 411
Ladies' Smock 210
Tobacco 388
Tresses 133
Lady Fern 21
Lady's Slipper 129
Large Yellow 129
Pink 129
Showy 129
Smaller Yellow 129
Stemless 129
Wild 129
Lady's Sorrel 261
" Thumb 162
La-kwa 371
Lamb's Cress 210
Lettuce 370
Quarters 166
Lambkill 309
Lamium 336
Lamium
album 428
amplexicaule 336
hybridum 336
maculatum 336, 428
purpureum 336
Lance-leaved Violet 287
Land Cress 210
Laportea 155
canadensis 155
Lappula 328
echinata 328
Lappula 328
virginiana 328
Lapsana 408
communis 408
Larch 35
American 35
Black 35
European 35
Large Coral Root 135
Cranberry 314
Pepper-root 209
Round-leaved Orchis 131
Toothwort 209
Twayblade 136
Large-flowered Syringa 217
Large-flowered White Trillium 124
Large-leaved Sandwort 174
Large-toothed Aspen 142
Larix 35
americana 35
decidua 35
europaea 35
laricina 35
Lark-heel 192
Larkspur 192
Field 192
Garden 192
Rocket 192
Late Low Blueberry 313
Lathyrus 257
latifolius 257
maritimus 257
palustris
var. *linearifolius* 257
pratensis 257

Lauraceae 195, 437

Laurel

American 309

Great 308

Ground 311

Mountain 309

Pale 309

Sheep 309

Swamp 309

Laurel Family 195

Laurel-leaved Willow 138

Laurestinus 368

Lavender

Sea 314

Lavender Willow 141

Leadwort Family 314

Leafcup 390

Leafy Spurge 266

Leather Leaf 310

Leatherwood 289

Lechea 283

intermedia 283*Leggettii* 284*major* 283*maritima* 283var. *interior* 283*minor* 283var. *maritima* 283*moniliformis* 284*tenuifolia* 283*thymifolia* 283*villosa* 283

Ledum 307

groenlandicum 307*latifolium* 307

Leek

Wild 119

Leersia 58

oryzoides 58*virginica* 58

Legousia

perfoliata 372

Leguminosae 246, 437, 440

Lemna 111

cyclostasa 111*minor* 112*perpusilla* 425

Lemna

trisulca 111*valdiviana* 111

Lemnaceae 111, 436

Lemon

Wild 194

Lemon Balm 339

Lily 120

Lens 256

esculenta 256, 434

Lentibulariaceae 357, 438

Lentil 256

Leontodon 409

autumnalis 409var. *pratensis* 409*hastilis* 409, 432*hirtus* 409*nudicaulis* 409

Leonurus 336

Cardiaca 336

Leopard Flower 128

Lepachys 393

pinnata 393, 435

Lepidium 200

apetalum 200*campestre* 201*Draba* 421, 433*intermedium* 200*rudemale* 200, 433*sativum* 201, 431*virginicum* 200

Leptamnium

virginianum 359

Leptandra

virginica 353

Leptilon

canadense 387

Leptochloa 69

fascicularis 69

Leptoloma 50

cognatum 50

Leptorchis

liliiifolia 136*Loeselii* 136

Lespedeza 254

Bicknellii 255*capitata* 255

- Lespedeza**
 var. *velutina* 255
 frutescens 255
 hirta 255
 Nuttallii 254
 polystachya 255
 procumbens 254
 repens 254
 reticulata 254
 simulata 255
 Stuvei 254
 var. *intermedia* 255
 velutina 255
 violacea 254
 virginica 254
Lesser Duckweed 111
 Starwort 176
 Stitchwort 176
Lettuce 411, 412
 Lamb's 370
 Prickly 411
 White 413
 Wild 411
 " *Blue* 412
Leucojum 126
 aestivum 126
Leucothoë 309
 racemosa 309
Leverwood 146
Levisticum 302
 Levisticum 302
 officinale 302
Liatris 377
 cylindracea 429
 scariosa 377, 429
 squarrosa 429
Life-of-Man 214
Life-root 404
Ligusticum 301
 Levisticum 302
 scothicum 301
Ligustrum 319
 vulgare 319
Lilac 318
 Common 318
 Summer 206
Lilaeopsis 301
- Lilaeopsis**
 lineata 301
Liliaceae 118, 436, 439
Lilium 120
 canadense 120
 Catesbaei 425
 philadelphicum 120
 superbum 120
 tigrinum 120
Lily
 Blackberry 128
 Blue Day 119
 Bull-head 183
 Canada 120
 Common Day 120
 Cow 183
 Day 119, 120
 Frog 183
 Great Water 184
 Hog 183
 Horse 183
 Lemon 120
 Little Water 184
 Plantain 119
 Pond 183
 Red 120
 Rock 192
 Small Yellow Pond 183
 Spider 113
 Sweet-scented White Water 183
 Tiger 120
 Trout 121
 Turk's-cap 120
 Water 183
 White Pond 183
 " *Water* 183, 184
 Wild Orange-red 120
 " *Tiger* 120
 " *Yellow* 120
 Wood 120
 Yellow Day 120
 " *Dog's-tooth* 121
 " *Pond* 183
Lily Family 118
Lily of the Valley 124
 Wild 123
Limnanthaceae 268, 437

- Limnanthemum*
lacunosum 320
Limnorchis
dilatata 130
huronensis 130
hyperborea 130
Limodorum
tuberosum 133
Limonium 314
carolinianum 314
Limosella 352
aquatica
var. tenuifolia 352
tenuifolia 352
Linaceae 259, 437, 440
Linaria 350
canadensis 350
Cymbalaria 350
Elatine 350, 432
genistifolia 428
Linaria 350
minor 350, 434
vulgaris 350
Linden 277
American 277
European 277
Linden Family 277
Lindera
Benzoin 196
Linnaea 367
borealis 367
var. americana 367
Linseed 259
Linum 259
medium 260
striatum 259
sulcatum 259
usitatissimum 259
virginianum 260
Lion's Heart 335
Tail 336
Lion's-foot 413
Liparis 136
liliifolia 136
Loeselii 136
Liquidambar 220
Styraciflua 220
Liquorice 252
Wild 252, 362
Liriodendron 194
Tulipifera 194
Lithospermum 329
arvense 329
officinale 330
Little Pignut Hickory 145
Little-boy's Breeches 198
Live-for-ever 214
Live-long 214
Liver Berry 123
Liverleaf 189
Liverwort 189
Lizard's Tail 137
Lobelia 374
cardinalis 374
Dortmanna 374
inflata 374
Kalmii 374
siphilitica 374
spicata 374
Lobelia
Great Blue 374
Water 374
Lobelia Family 374
Lobeliaceae 374, 439
Lobel's Catchfly 179
Lobularia 199
maritima 199, 431
Locust 251
Black 251
Bristly 251
Clammy 251
Common 251
Flowering 251
Honey 246
Lolium 78
italicum 78
multiflorum 78
perenne 78
temulentum 78
Lombardy Poplar 143
Long-bracted Orchis 130
Long-fruited Anemone 189
Long-leaved Starwort 175
Stitchwort 175

- Long-leaved
 Sundew 213
Long-spurred Violet 288
Lonicera 365
 caerulea 365
 var. *villosa* 365
 canadensis 365
 caprifolium 429
 ciliata 365
 dioica 366
 glauca 366
 japonica 366
 orientalis 366
 sempervirens 366
 tatarica 365
 Xylosteum 365
Loosestrife 290, 315
 False 291
 Fringed 316
 Golden 315
 Purple 290
 Spiked 290
 Spotted 315
 Swamp 289
 Tufted 316
Loosestrife Family 289
Lophanthus
 anisatus 334
 nepetoides 334
 scrophulariaefolius 334
Lophotocarpus 47
 spongiosus 47
Lopseed 360
Lopseed Family 360
Loranthaceae 156, 436
Lotus 250
 americanus 250
 corniculatus 250
Lotus 184
 American 184
 Yellow 184
Lousewort 355, 357
 Common 357
 Swamp 357
Lovage 301, 302
 Scotch 301
Love Vine 190, 325, 326
Love-in-a-Mist 421
Love-lies-bleeding 170
Low Birch 148
 Black Blueberry 313
 Blackberry 239
 Cornel 304
 Cudweed 390
 Sweet Blueberry 313
Lucerne 250
Ludvigia 291
 alternifolia 291
 palustris 291
 polycarpa 291
 sphaerocarpa 291
Lunaria 208
 annua 208, 431
Lupine 248
 Wild 248
Lupinus 248
 perennis 248
Luzula 117
 campestris 117
 var. *multiflora* 117
 saltuensis 117
 vernalis 117
Lychnis 177
 alba 178
 chalcedonica 178
 Coronaria 177
 dioica 178
 diurna 178
 Flos-cuculi 178
 Githago 177
 vespertina 178
Lychnis
 Day-blooming 178
 Evening 178
 Ever-blooming 178
 Morning 178
 Mullein 177
 Ragged 178
 Red 178
Lycium 347
 halimifolium 347
 vulgare 347
Lycopersicum 344
 esculentum 344

- Lycopersicum*
Lycopersicon 344
 Lycopodiaceae 30, 436
Lycopodium 30
adpressum 30
annotinum 31
clavatum 31
 var. *monostachyon* 31
complanatum 31
 var. *chamaecyparissus* 31
 " *flabelliforme* 31
inundatum 30
 var. *Bigelovii* 30
lucidulum 30
obscurum 31
 var. *dendroideum* 31
Selago 30, 422
tristachyum 31
Lycopus 341
 americanus 342
 communis 341
 membranaceus 341
 rubellus 342
 sessilifolius 341
 sinuatus 342
 uniflorus 341
 virginicus 341
Lygodium 26
 palmatum 26
 Lyme Grass 80
Lyonia 310
 ligustrina 310
 var. *foliosiflora* 310
 mariana 310
 Lyre-leaved Sage 337
Lysias
 Hookeriana 131
 orbiculata 131
Lysimachia 315
 foliosa 315
 Nummularia 316
 producta 315
 punctata 315
 quadrifolia 315
 stricta 316
 terrestris 316
 thyrsiflora 316
Lysimachia
 vulgaris 315, 432
 Lythraceae 289, 438, 440
Lythrum 290
 alatum 290
 Salicaria 290
Maclura 154
 aurantiaca 154
 pomifera 154, 420
Macrocalyx
 Nyctelea 327
 Madder
 Wild 362
 Madder Family 361
 Mad-dog Skullcap 333
 Madwort 199
 Magnolia Family 194
 Magnoliaceae 194, 437
 Mahaleb Cherry 245
 Maianthemum 123
 canadense 123
 Maiden Pink 181
 Maidenhair 18
 Maidenhair Spleenwort 20
 Maize 48
 Male Berry 310
 Mallow 279
 Common 279
 Curled 279
 Dwarf 279
 European 279
 High 279
 Indian 278
 Marsh 278
 Musk 279
 Rose 279
 Swamp Rose 280
 Wild Rose 280
 Mallow Family 278
 Maltese Cross 178
Malus
 Malus 222
 Malva 279
 Alcea 279
 crispa 279
 moschata 279
 rotundifolia 279

- Malva**
 sylvestris 279
Malvaceae 278, 438, 440
Mandrake 194
Manna Grass 74
Man-of-the-Earth 324
Many-flowered Agrimony 241
Maple 272
 Ash-leaved 273
 Bird's-eye 273
 Black Sugar 273
 Flowering 278
 Mountain 272
 Norway 273
 Red 273
 Rock 272
 Silver 273
 Soft 273
 Striped 272
 Sugar 272
 Swamp 273
 Sycamore 272
 White 273
Maple Family 272
Maple-leaved Goosefoot 166
 Viburnum 368
Mercury 269
Marguerite 400
 Golden 399
Marigold 403
 Bur 396
 Marsh 191
 Pot 403
 Water 397
Marjoram
 Wild 340
Marram 65
Marrow Squash 372
Marrubium 333
 vulgare 333
Marsh Bellflower 373
 Buttercup 187
 Calla 110
 Cinquefoil 233
 Cress 207
 Crowfoot 186, 187
 Elder 391
Marsh
 Fern 22
 Five-finger 233
 Fleabane 388
 Foxtail 62
 Grass 68
 Holy Rose 310
 Mallow 278
 Marigold 191
 Pea 257
 Pink 319
 Purslane 291
 Rosemary 310, 314
 St. John's-wort 282
 Skullcap 333
 Speedwell 354
 Trefoil 320
Marsilea 28
 quadrifolia 28
Marsileaceae 28, 436
Martynia 360
 louisiana 360, 434
 proboscidea 360
Martynia Family 360
Martyniaceae 360
Marvel of Peru 171
Mary-bud 403
Massachusetts Fern 22
Masterwort 303
Matricaria 399
 Chamomilla 399, 435
 discoidea 399
 inodora 399, 435
 matricarioides 399
 suaveolens 399, 435
Matrimony Vine 347
 Common 347
Matteuccia
 Struthiopteris 25
May Apple 194, 308
 Bush 225
 Pear 224
 Tree 225
May-blobs 191
Mayflower 182, 189, 190, 215, 311,
 364
May-weed 398

Mazzard Cherry 245

Mead-sweet 235

Meadow Beauty 290

Buttercup 188

Campion 178

Centaury 407

Chickweed 176

Clover 248

Cranesbill 261

Crowfoot 188

Fescue 76

Foxtail 62

Garlic 119

Geranium 261

Gowan 191

Grass 72

Pink 178, 181, 356

Queen 235

Rose 242

Rue 188

Sage 337

Sorrel 159

Meadow-sweet 221, 235

English 235

Mealy Tree 368

Medeola 124

virginiana 124

Medicago 250

arabica 250, 434

denticulata 250

hispida 250, 434

lupulina 250

maculata 250

sativa 250

Medick 250

Black 250

Hop 250

Spotted 250

Toothed 250

Meeting-houses 192

Meibomia

bracteosa 253

canadensis 253

canescens 252

Dillenii 253

glabella 252

grandiflora 252

Meibomia

marylandica 254

Michauxii 252

nudiflora 252

obtusa 254

paniculata 253

rigida 253

sessilifolia 253

Melampyrum 356

americanum 356

lineare 356

Melanthium 118

latifolium 118, 423

racemosum 118

Melastoma Family 290

Melastomaceae 290, 438

Melic Grass 72

Melica 72

striata 72

Melilot

White 249

Yellow 249

Melilotus 249

alba 249

officinalis 249

Melissa 339

officinalis 339

Melon 371

Menispermaceae 194, 437

Menispermum 194

canadense 194

Mentha 342, 441

alopecuroides 342

aquatica 342

var. *crispa* 343

arvensis 343

var. *canadensis* 344

canadensis 344

Cardiaca 343

citrata 343

crispa 343

gentilis 343

longifolia 342

piperita 342

rotundifolia 428

sativa 343

spicata 342

Mentha
sylvestris 342
 var. *alopecuroides* 342
viridis 342
Menyanthes 320
 trifoliata 320
Mercury 269
 Three-seeded 265
 Vegetable 127
Mermaid-weed 295
Mespilus
 flabellata 227
Mesquite Grass 69
Mexican Fire Plant 165
 Poppy 197
 Tea 165
Mezereum Family 289
Micranthelmis
 lobata 372
Micranthemum
 micranthemoides 429
 Nuttallii 429
Microstylis 136
 monophyllos 136, 429
 ophioglossoides 136
 unifolia 136
Mignonette 212
 Common 212
 Garden 212
 Upright 212
 White 212
Mignonette Family 212
Mikania 377
 scandens 377
Mild Water Pepper 162
Milfoil 398
 Water 185, 294, 295
Milk Purslane 266
Milkweed 322
 Common 323
 Green 323
 Poke 323
 Purple 322
 Swamp 322
 Whorled 323
Milkweed Family 322
Milkwort 263, 264

Milkwort
 Purple 264
Milkwort Family 263
Millet
 Broom Corn 51
 Common 51, 57
 European 51
 German 57
 Golden-Wonder 57
 Italian 57
 Japanese Barnyard 56
 Sowna 56
 True 51
Mimulus 352
 alatus 352
 glabratus
 var. *Jamesii* 429
 guttatus 352
 Jamesii 429
 Langsdorffii 352, 429
 luteus 352
 ringens 352
Mint 342
 Bergamot 343
 Cat 334
 Curled 343
 Field 343
 Horse 338, 342
 Mountain 340
 Spotted 343
 Water 342
 Whorled 343
 Wild 344
 Wood 338, 339
Mint Family 332
 Geranium 400
Mirabilis 171
 Jalapa 171, 433
Missouri Currant 219
 Gooseberry 217
Mist 181
Mistletoe
 Dwarf 156
Mistletoe Family 156
Mitchella 364
 repens 364
Mitella 216

- Mitella**
 diphylla 216
 nuda 216
 prostrata 216
Miterwort 216
 False 215
Mithridate Mustard 200, 201
Moccasin Flower 129
 Yellow 129
Mock Apple 154
 Bishop's-weed 299
 Cypress 165
 Orange 154, 217
 Pennyroyal 339
 Strawberry 232
Mocker Nut 145
Modesty 198
Moehringia
 lateriflora 174
 macrophylla 174
Mole Plant 267
Molinia 70
 coerulea 70
Mollugo 173
 verticillata 173
Momordica 371
 Charantia 371, 435
Monarda 338
 didyma 338
 clinopodia 338
 fistulosa 338
 var. *mollis* 338
 " *rubra* 338
 media 338
 mollis 338
 punctata 428
Moneses 306
 grandiflora 306
 uniflora 306
Money-plant 208
Moneywort 316
Monkey Flower 352
 Yellow 352
Monotropa 307
 Hypopitys 307
 uniflora 307
Moonseed 194
Moonseed Family 194
Moonwort 27, 208
Moose Elm 152
Moosewood 272, 289, 368
Morello Cherry 245
Morning Campion 178
Morning Glory 324
 Common 324
 Ivy-leaved 324
 Small Red 324
 Wild 325
Morning Lychnis 178
Mortification Root 278
Morus 154
 alba 154
 rubra 154
Moss
 Club 30
 Common Club 31
 Ditch 47
 Golden 214
 Rose 182
 Tree Club 31
Moss Pink 326
Mossy Stonecrop 214
Mossy-cup Oak 150
Moth Mullein 349
Mother's Heart 201
Motherwort 336
 Common 336
Mountain Ash 223
 Cinquefoil 233
 Clematis 190
 Crowfoot 186
 Currant 219
 Five-finger 233
 Fly Honeysuckle 365
 Fringe 197
 Holly 270, 271
 Laurel 308
 Maple 272
 Mint 340
 Plum 244
 Rice 59
 Sandwort 175
 Spleenwort 20
 Starwort 175

- Mountain
 Sumach 223
 Virgin's Bower 190
 Mouse-ear 414
 Spring 177
 Mouse-ear Chickweed 176
 Cress 206
 Mouse-ears 189
 Mouth-root 191
 Moxie Plum 312
 Mud Plantain 113
 Purslane 282
 Mudwort 352
 Mugwort
 Common 401
 Muhlenbergia 61
 ambigua 61
 capillaris 62
 diffusa 62
 foliosa 61
 glomerata 61
 mexicana 61
 racemosa 61
 Schreberi 62
 sobolifera 61
 sylvatica 61
 tenuiflora 61
 Willdenowii 61
 Mulberry 154
 Paper 154
 Red 154
 Silkworm 154
 White 154
 Mulberry Blackberry 237
 Mullein 349
 Common 349
 Moth 349
 Mullein Lychnis 177
 Pink 177
 Muscari 121
 botryoides 121
 racemosum 121
 Musk Erodium 262
 Mallow 279
 Rose 279
 Storksbill 262
 Muskmelon 371
 Musquash Root 299
 Mustard 202
 Ball 202
 Bastard 203
 Black 203
 Chinese 203
 Clown's 201
 Corn 203
 Curled 203
 Dish 200
 False 211
 Garlic 205
 Hare's-ear 204
 Hedge 205
 Hoary Hedge 205
 Indian 203
 Mithridate 200, 201
 Pot-herb 203
 Sand 204
 Tansy 205
 Tower 210
 Treacle 200, 206
 Tumble 205
 Wall 204
 White 202
 Wild 203
 Wormseed 206
 Mustard Family 199
 Myagrum 201, 202
 Myosotis 329
 arvensis 329
 laxa 329
 palustris 329
 scorpioides 329
 verna 329
 virginica 329
 Myrica 143
 asplenifolia 143
 carolinensis 143
 cerifera 143
 Gale 143, 420
 Myricaceae 143, 436
 Myriophyllum 294
 ambiguum 295
 var. *capillaceum* 295
 " *limosum* 295
 humile 295

- Myriophyllum**
 forma capillaceum 295
 " *natans* 295
 pinnatum 295
 scabratum 295
 spicatum 294
 tenellum 295
 verticillatum
 var. *pectinatum* 294
Myrtle
 Blue 321
 Bog 143
 Dutch 143
 Wax 143
 Yellow 316
Myrtle Spurge 267
Nabalus
 albus 413
 altissimus 413
 serpentarius 413
 trifoliolatus 413
Naiad 45
Najadaceae 40, 436
Najas 45
 flexilis 45
 gracillima 45
 indica 45
 var. *gracillima* 45
Nannyberry 369
Narcissus 126
 poeticus 126
 Pseudo-Narcissus 126
Narcissus
 Poet's 126
Narrow Dock 158
Narrow-leaved Spleenwort 20
Nasturtium
 A Armoracia 207
 officinale 206
 palustre 207
 var. *hispidum* 207
 sylvestre 207
Naumbergia
 thyrsiflora 316
Necklace Poplar 142
Necklace-weed 193
Neckweed 354
Needle Grass 60
Negundo
 aceroides 273
Nelumbo 184
 lutea 184
Nelumbo
 American 184
 Yellow 184
Nemopanthus 270
 fascicularis 271
 mucronatus 270
Nepeta 334
 Cataria 334
 Glechoma 334
 hederacea 334
Neslia 202
 paniculata 202, 433
Net-leaf Plantain 135
Nettle 155
 Bull 345
 Canada 155
 Common Hemp 335
 Dead 336
 Dwarf 155
 False 156
 Great 155
 Hedge 337
 Hemp 335
 Horse 345
 Red Dead 336
 " Hemp 335
 Slender 155
 Small 155
 Spotted Dead 336
 Stinging 155
 Stingless 156
 Tall Wild 155
 Wood 155
Nettle Family 152
Nettle Tree 153
 American 153
Nettle-leaved Goosefoot 167
Newcastle Thorn 225
New England Aster 383
New Jersey Tea 275
New York Fern 22
New Zealand Spinach 173

- Nicandra 347
 physalodes 347
 Nicotiana 348
 alata 348
 rustica 348, 432
 Tabacum 348, 432
 Nigella 191
 damascena 421, 433
 sativa 191, 433
 Nigger-head 393
 Nigger-heads 98
 Night-flowering Catchfly 179
 Nightshade 344
 American 171
 Black 345
 Common 345
 Enchanter's 294
 Woody 345
 Nightshade Family 344
 Nimble Will 62
 Nine-bark 220
 Nipple-wort 408
 Nodding Chickweed 177
 Pogonia 132
 Trillium 124
 None-so-pretty 179
 Nonesuch 78, 178, 250
 Northeastern Rose 243
 Northern Bedstraw 362
 Gooseberry 218
 Starwort 175
 Stitchwort 175
 Norway Maple 273
 Spruce 36
 Nosebleed 356
 Nuphar
 advena 183
 var. *minus* 183
 Kalmianum 183
 Nut Rush 91
 Nutmeg Flower 191
 Nyctaginaceae 171, 437, 439
 Nymphaea 183
 advena 183
 var. *variegata* 183
 Kalmiana 183
 microphylla 183
 Nymphaea
 odorata 183
 var. *minor* 183
 reniformis 184
 rubrodisca 183
 Nymphaeaceae 183, 437
 Nymphoides 320
 lacunosum 320
 Nyssa 305
 sylvatica 305
 Oak 149
 Bear 152
 Black 152
 " Scrub 152
 Bur 150
 Champion 151
 Chestnut 150, 151
 Chinquapin 151
 Iron 150
 Jerusalem 165
 Mossy-cup 150
 Over-cup 150
 Pin 151
 Poison 269
 Post 150
 Quercitron 152
 Red 151
 Rock Chestnut 151
 Scarlet 151
 Scrub Chestnut 151
 Swamp Spanish 151
 " White 150
 White 149
 Yellow 150
 Yellow-barked 152
 Oak Fern 17
 Oakesia 119
 sessilifolia 119
 Oak-leaved Goosefoot 166
 Oat 67
 Common 67
 Purple 72
 Oat Grass 67
 Oats
 Water 58
 Oenothera 292
 biennis 292

- Oenothera*
 var. *cruciata* 292
 " *grandiflora* 293
 " *Oakesiana* 292
cruciata 292
fruticosa 293
 var. *hirsuta* 293
 " *humifusa* 293
 " *linearis* 293
grandiflora 293
laciniata 293, 434
linearis 293
 var. *Eamesii* 293
longipedicellata 294
Oakesiana 292
pratensis 294
pumila 293
sinuata 293
 Oil Nut 144
 Okra 280
 Old Field Birch 147
 Man 401
 Woman 401
 Old-fashioned Cherry 245
 Old-maid's Pink 180
 Old-witch Grass 51
 Oleaceae 317, 438, 440
 Olive Family 317
Onagra
 biennis 292
 var. *grandiflora* 293
 cruciata 292
 Oakesiana 292
 Onagraceae 291, 438, 440
 One-flowered Cancer-root 359
 Pyrola 306
 Wintergreen 306
 Onion 119
 Wild 119
 Onoclea 25
 sensibilis 25
 var. *obtusilobata* 25
 Struthiopteris 25
 Onopordum 407
 Acanthium 407
 Onosmodium 330
 virginianum 330
 Ophioglossaceae 27, 436
 Ophioglossum 27
 vulgatum 27
 Opium Poppy 197
Opulaster
 opulifolius 220
Opuntia 289
 Opuntia 289
 Rafinesquii 427
 vulgaris 289
 Orach 167
 Beach 168
 Spreading 167
 Orange
 Mock 154, 217
 Osage 154
 Orange Grass 282
 Hawkweed 414
 Orange-flower Tree 217
 Orange-root 193
 Orchard Grass 72
 Orchidaceae 129, 436
 Orchis 130
 rotundifolia 425
 spectabilis 130
 Orchis
 Fen 136
 Fringed 130
 Large Purple Fringed 132
 " Round-leaved 131
 Long-bracted 130
 Ragged 132
 " Fringed 132
 Rein 130
 Showy 130
 Small Green Wood 131
 " Pale Green 130
 Smaller Purple Fringed 132
 Tall Leafy Green 130
 " White Bog 130
 White Fringed 131
 Yellow Fringed 131
 Orchis Family 129
 Origanum 340
 vulgare 340
 Ornithogalum 121
 umbellatum 121

Orobanchaceae 359, 438
 Orobanche 359
 uniflora 359
 Orontium 111
 aquaticum 111
 Orpine 214
 Garden 214
 Orpine Family 214
 Oryzopsis 59
 asperifolia 60
 canadensis 59
 junceae 59
 melanocarpa 60
 pungens 59
 racemosa 60
 Osage Apple 154
 Orange 154
 Osier 137
 Golden 143
 Osmorhiza 298
 brevistylis 298
 Claytoni 298
 longistylis 298
 Osmunda 26
 cinnamomea 27
 var. *frondosa* 27
 " *incisa* 27
 Claytoniaria 26
 var. *dubia* 26
 regalis 26
 Osmundaceae 26, 435
 Ostrich Fern 25
 Ostrya 146
 virginiana 146
 virginica 146
 Oswego Tea 338
 Over-cup Oak 150
 Oxalidaceae 260, 437, 440
 Oxalis 260
 Acetosella 260
 Brittoniae 260
 Bushii 261
 corniculata 261
 var. *stricta* 260, 261
 cymosa 261
 filipes 260
 repens 261

Oxalis
 rupea 261
 stricta 260, 261
 violacea 260
 Ox-eye 392
 Ox-eye Daisy 400
 Ox-tongue 410
 Oxybaphus 172
 angustifolius 172
 hirsutus 172
 linearis 172
 nyctagineus 172
 Oxycochus
 macrocarpus 314
 Oxycochus 314
 Oxygraphis
 Cymbalaria 185
 Oyster-plant 410
 Painted Cup 356
 Scarlet 356
 Painted Trillium 125
 Pale Corydalis 198
 Dock 158
 Laurel 309
 Persicaria 160
 St. John's-wort 281
 Touch-me-not 274
 Panax 296
 quinquefolium 296
 trifolium 296
 Panic Grass 51
 Panicked Cornel 305
 Panicularia
 acutiflora 75
 americana 74
 borealis 75
 canadensis 74
 elongata 74
 fluitans 75
 nervata 74
 obtusa 74
 pallida 74
 Panicum 51, 441
 Addisonii 55
 agrostoides 52
 albemarlense 54
 amaroides 51

Panicum*amarum*var. *minor* 51*Ashei* 55*atlanticum* 54*auburne* 54*autumnale* 50*barbulatum* 53*Bicknellii* 52*boreale* 53*Boscii* 56var. *molle* 56*Bushii* 52*capillare* 51*clandestinum* 55*columbianum* 55*Commonsianum* 55*commutatum* 55*crusgalli* 56var. *hispidum* 56*depauperatum* 52*dichotomiflorum* 51*dichotomum* 52*Eatoni* 53*Enslini* 52*filiculme* 54*filiforme* 49*glabrum* 49*haemacarpum* 54*huachucae* 53var. *silvicola* 53*implicatum* 54*latifolium* 56var. *molle* 56*lanuginosum* 53*Lindheimeri* 53*linearifolium* 52*longifolium* 52*macrocarpum* 56*meridionale* 54*microcarpum* 53*miliaceum* 51*minimum* 51*minus* 51*nemopanthum* 52*nitidum* 53*oricola* 54**Panicum***ovale* 54*philadelphicum* 51, 416*Porterianum* 56*proliferum* 51*psammophilum* 55*pseudopubescens* 54*pubescens* 53*pubifolium* 56*sanguinale* 50*scoparioides* 54*scoparium* 55*Scribnerianum* 55*sphaerocarpon* 55*spretum* 53*stipitatum* 52*subvillosum* 54, 417*tennesseense* 54*tsugetorum* 55*unciphyllum* 53var. *implicatum* 54" *meridionale* 54*verrucosum* 51*villosissimum* 54, 417*virgatum* 52*Walteri* 56*Werneri* 52, 416*xanthophysum* 55*xanthospermum* 54**Pansy** 288

Field 288

Wild 288

Papaver 197*dubium* 197*Rhoeas* 197, 431*somniferum* 197**Papaveraceae** 196, 437, 440**Paper Birch** 147, 148

Mulberry 154

Pappoose Root 195**Parietaria** 156*pennsylvanica* 156**Parilla**

Yellow 194

Parnassia 216*caroliniana* 216**Parsley** 300

- Parsley**
 Common 300
 Fool's 302
 Garden 300
 Hemlock 303
 Sea 301
 Spotted 298
Parsley Family 297
Parsnip 302
 Cow 303
 Golden Meadow 300
 Poison 302
 Water 300
 Wild 302
Parsonsia
 petiolata 290
Parthenocissus
 quinquefolia 276
Partridge Berry 364
 Pea 247
Paspalum 50
 circulare 50
 laeve 425
 Muhlenbergii 50
 plenipilum 50
 prostratum 50
 psammophilum 50
 setaceum 50
Pastinaca 302
 sativa 302
Pasture Thistle 406
Patience
 Garden 157
Patience Dock 157
Paul's Betony 354
Pea 257
 Beach 257
 Chick 255
 Everlasting 257
 Field 258
 Garden 257
 Hoary 251
 Marsh 257
 Partridge 247
 Perennial 257
 Sensitive 247
Peach 246
 Peach-leaved Dock 158
Peanut
 Hog 259
 Wild 259
Pear 222
 Choke 222
 Indian 224
 May 224
 Prickly 289
 Sugar 224
 Wild 222
Pearl Grass 74
Pearl-plant 330
Pearlwort 174
 Annual 174
 Small-flowered 174
 Spurrey 174
Pearly Everlasting 389
Pea-vine Clover 248
Pedicularis 357
 canadensis 357
 lanceolata 357
Pellaea 18
 atropurpurea 18
 gracilis 19
 Stelleri 19
Pellitory 156
Peltandra 110
 undulata 110
 virginica 110
Pencil Tree 388
Penny Cress 200
Pennyroyal 339
 American 339
 Bastard 332
 Mock 339
Pennywort
 Water 297
Penthorum 214
 sedoides 214
Pentstemon 351
 calycosus 351
 Digitalis 351
 grandiflorus 352, 432
 hirsutus 351
 laevigatus 351
 var. *Digitalis* 351

- Pentstemon**
Pentstemon 351
pubescens 351
tubiflorus 351
Pepper 344
 Bird's 200
 Cayenne 344
 Chili 344
 Common Water 162
 Mild Water 162
 Poor Man's 201
 Red 344
Pepper Family 137
Pepperbush
 Sweet 306
Peppergrass 200
 California 203
 Garden 201
 Golden 201
 Roadside 200
 Wild 200
Pepperidge 305
Pepperidge Bush 195
Peppermint 342
Pepper-root 208
 Cut-leaved 209
 Large 209
Pepperwort 200
Peranium
ophioides 134
pubescens 135
repens 134
tesselatum 134
Perennial Pea 257
Perfumed Cherry 45
Perilla 344
 frutescens 344
 ocymoides 344
Periploca
 graeca 428
Periwinkle 321
 Common 321
Persicaria
 Common 161
 Dock-leaved 160
 Pale 160
 Pink 161
Persicaria
 Water 161
 Willow 160
Persimmon 317
 Common 317
Perularia
 flava 130
Petasites 402
 palmatius 402
 Petasites 402
 vulgaris 402, 435
Petroselinum 300
 hortense 300
 Petroselinum 300
Petty Spurge 267
Petunia 349
 axillaris 349
 violacea 349
Petunia
 Purple 349
 White 349
Phacelia 327
 Purshii 327, 434
 viscida 327, 434
Phalaris 58
 arundinacea 59
 var. *picta* 59
 canariensis 58
Phaseolus 258
 perennis 258
 polystachyus 258
 vulgaris 258, 430
 var. *nanus* 258, 430
Pheasant's-eye Pink 181
Phegopteris 17
 Dryopteris 17
 hexagonoptera 17
 Phegopteris 17
 polypodioides 17
Philadelphus 217
 coronarius 217
 inodorus 217, 433
 pubescens 217
Philotria
 canadensis 47
Phleum 62
 pratense 62

Phlox 326
acuminata 326
amplifolia 326
glandulosa 326
maculata 326
 var. *candida* 326
paniculata 326
pilosa 326
subulata 326
Phlox
 Garden 326
Phragmites 70
 communis 70
 Phragmites 70
 vulgaris 70
Phryma 360
 Leptostachya 360
Phrymaceae 360, 438
Physalis 346
 Alkekengi 346
 angulata 346, 434
 heterophylla 346
 var. *ambigua* 346
 " *nyctaginea* 347
 lanceolata 347
 philadelphica 347
 pruinosa 346
 pubescens 428
 subglabrata 347
 virginiana 346, 347
Physalodes
 physalodes 347
Physocarpus 220
 opulifolius 220
Physostegia 335
 virginiana 335
Phytolacca 171
 decandra 171
Phytolaccaceae 171, 437
Picea 36
 Abies 36
 alba 36
 brevifolia 36
 canadensis 36
 excelsa 36
 mariana 36
 nigra 36

Picea
 var. *rubra* 36
 rubra 36
Pickerel-weed 113
Pickerel-weed Family 113
Pickle Plant 168
Picris 409
 echioides 410, 435
 hieracioides 409
Pie Cherry 245
Pieris
 mariana 310
Pigeon Berry 171
 Grape 276
 Grass 57
Pignut 145
Pignut Hickory 145
Pigweed 165, 166, 169
 Bushy 170
 Common 169
 Rough 169
 Slender 169
 Sweet 165
 White 170
 Winged 165
Pilea 156
 pumila 156
Pilewort 403
Pimbina 368
Pimpernel 241, 317
 Common 317
 False 352
 Water 315
 Yellow 301
Pimpinella
 integerrima 301
Pin Cherry 244
 Oak 150
Pinaceae 34, 436, 439
Pine 34
 Ground 31
 Pitch 34
 Prince's 306
 Red 35
 Running 31
 Scotch 35
 White 34

- Pine
 Yellow 34
 Pine Family 34
 Pineapple-weed 399
 Pinesap 307
 Pineweed 282
 Pink 181
 Bunch 181
 Deptford 181
 Fire 179
 French 181
 Garden 181
 Grass 133, 181
 Ground 326
 Hedge 180
 Large Marsh 319
 Maiden 181
 Marsh 319
 Meadow 178, 181, 356
 Moss 326
 Mullein 177
 Old-maid's 180
 Pheasant's-eye 181
 Rose 177
 Scotch 181
 Sea 319
 Wild 179
 Pink Azalea 308
 Corydalis 198
 Family 173
 Knotweed 161
 Lady's Slipper 129
 Persicaria 161
 Pinks
 Wax 182
 Pinkweed 162
 Pinnatifid Spleenwort 19
 Pinus 34
 inops 424
 resinosa 35
 rigida 34
 Strobus 34
 sylvestris 35, 416, 424
 virginiana 424
 Pinweed 283
 Beach 283
 Hairy 283
 Pinxter Flower 308
 Piperaceae 137, 436
 Pipes 29
 Pipewort 112
 Pipewort Family 112
 Pipsissewa 306
 Pisum 257
 sativum 257, 430
 var. *arvense* 258, 430
 Pitch Pine 34
 Pitcher-plant 213
 Pitcher-plant Family 213
 Plane Tree 220
 Plane Tree Family 220
 Plantaginaceae 360, 438, 440
 Plantago 360
 aristata 361
 decipiens 361
 elongata 361
 halophila 360
 lanceolata 361
 major 360
 var. *intermedia* 360
 maritima 361
 patagonica
 var. *aristata* 361
 pusilla 361
 Rugelii 360
 virginica 361
 Plantain 360
 Common 360
 Downy Rattlesnake 135
 English 361
 Indian 403
 Lesser Rattlesnake 134
 Mud 113
 Net-leaf 135
 Poor Robin's 414
 Rattlesnake 134
 Robin's 387
 Seaside 361
 Water 47
 Plantain Family 360
 Lily 119
 Plantain-leaved Everlasting 389
 Platanaceae 220, 437
 Platanus 220

- Platanus*
occidentalis 220
Pleurisy-root 322
Pluchea 388
camphorata 388
Plum 243
Alleghany 244
Beach 244, 245
Bullace 244
Canada 246
Garden 246
Horse 246
Ivory 311
Mountain 244
Moxie 312
Wild 246
" *Goose* 246
" *Red* 246
" *Yellow* 246
Plumbaginaceae 314, 438
Plumed Thistle 405
Plumeless Thistle 405
Poa 72
alsodes 73
annua 72
autumnalis 425
compressa 73
debilis 73
flava 73
flexuosa 425
pratensis 73
serotina 73
triflora 73
trivialis 73
Podophyllum 194
peltatum 194, 421
Podostemaceae 213, 437
Podostemum 213
ceratophyllum 213
Poet's Narcissus 126
Pogonia 132
affinis 133, 420
ophioglossoides 132
pendula 132
trianthophora 132
verticillata 133
Pogonia
Nodding 132
Rose 132
Smaller Whorled 133
Whorled 133
Poison Dogwood 268
Elder 268
Flag 127
Hemlock 298
Ivy 269
Oak 269
Parsnip 302
Sumach 268
Vine 269
Poke
Common 171
Indian 118
Poke Milkweed 323
Root 171
Pokeweed 171
Common 171
Pokeweed Family 171
Polanisia 211
graveolens 211
trachysperma 211
Polemoniaceae 326, 438, 440
Polemonium 327
coeruleum 327
Van-Bruntiae 327
Polemonium Family 326
Polycodium
stamineum 313
Polygala 263
ambigua 264
cruciata 264
Nuttallii 264
paucifolia 263
polygama 264
sanguinea 264
Senega 264
verticillata 264
var. ambigua 264
viridescens 264
Polygala
Fringed 263
Whorled 264
Polygalaceae 263, 437

Polygonaceae 157, 437, 439

Polygonatum 123

biflorum 123

commutatum 123

giganteum 123

Polygonella 164

articulata 164

Polygonum 159, 441

acre 162

var. *leptostachyum* 162

amphibium 161

var. *Hartwrightii* 161" *terrestre* 161

arifolium 163

aviculare 160

var. *littorale* 160" *vegetum* 160

Careyi 161

cilinode 163

var. *breve* 163" *erectum* 163

Convolvulus 163

cristatum 164*cuspidatum* 164, 420*dumetorum* 163forma *cristatum* 164var. *scandens* 163*emersum* 161*erectum* 160*exsertum* 159*Hartwrightii* 161*Hydropiper* 162*hydropiperoides* 162*incarnatum* 160*lapathifolium* 160var. *incarnatum* 160" *nodosum* 420*littorale* 160*maritimum* 426*Muhlenbergii* 161*orientale* 162*pennsylvanicum* 161*Persicaria* 162*prolificum* 159*punctatum* 162var. *leptostachyum* 162*ramosissimum* 160

Polygonum

forma *atlanticum* 160var. *prolificum* 159*sachalinense* 164*sagittatum* 163*scandens* 163*tenue* 160*virginianum* 163*Zuccarinii* 164

Polymnia 390

canadensis 390

Polypodiaceae 17, 435

Polypodium 17

vulgare 17var. *cambricum* 17

Polypody 17

Polypogon 65

monspeliensis 65, 431

Polystichum 21

acrostichoides 21var. *incisum* 21" *Schweinitzii* 21*Braunii* 424

Pond Lily 183

Pondweed 40

Horned 44

Pondweed Family 40

Pontederia 113

cordata 113var. *angustifolia* 113

Pontederiaceae 113, 436

Poor Annie 118

Poor Man's Pepper 201

Poor Man's Weather Glass 317

Poor Robin 178

Poor Robin's Plantain 414

Poplar 141

Balsam 142

Black 143

Downy 142

Hickory 194

Lombardy 143

Necklace 142

Silver-leaf 141

Swamp 142

Trembling 141

Tulip 194

Poplar

White 141

Yellow 194

Popple 141

Poppy 197

California 196

Common 197

Corn 197

Field 197

Garden 197

Mexican 197

Opium 197

Prickly 197

Red 197

Shirley 197

Smooth-fruited 197

White Prickly 197

Poppy Family 196

Populus 141

alba 141

balsamifera 142

var. *candicans* 142

candicans 142

deltoides 142

dilatata 143

grandidentata 142

heterophylla 142

monilifera 142

nigra 143

var. *italica* 143

tremuloides 141

Porcupine Grass 60

Portulaca 182

grandiflora 182, 431

, oleracea 182

Portulaca 182

Garden 182

Showy 182

Portulacaceae 182, 437, 440

Post Oak 150

Pot Marigold 403

Potamogeton 40, 441

alpinus 41

americanus 41

var. *novaeboracensis* 41

amplifolius 41

angustifolius 42

Potamogeton

var. *connecticutensis* 42

bupleuroides 43, 416

crispus 425

dimorphus 44

diversifolius 44

epihydus 41

var. *cayugensis* 41*fluitans* 41

foliosus 44

Friesii 43

gemmaiparus 44

heterophyllus 42

forma *graminifolius* 42" *longipedunculatus* 42" *maximus* 42" *myriophyllus* 42" *terrestris* 42

Hillii 43

hybridus 44

var. *multi-denticulatus* 44

lateralis 43, 423

lonchites 41var. *novaeboracensis* 41

lucens 42

var. *connecticutensis* 42*mucronatus* 43

natans 40

nitens 43

Nuttallii 41var. *cayugensis* 41

Oakesianus 41

obtusifolius 43

pauciflorus 44

pectinatus 44

pennsylvanicus 41*perfoliatus* 43var. *lanceolatus* 42" *Richardsonii* 42*pinnatum* 295

praelongus 42

pulcher 41

pusillus 43

var. *Sturrockii* 43

Richardsonii 42

Robbinsii 44

rufescens 41

- Potamogeton
 Spirillus 44
 Vaseyi 43
 zosterifolius 43
 Potato 344
 Potato-vine
 Wild 324
 Potentilla 232, 441
 Anserina 234
 argentea 233
 arguta 232
 canadensis 234
 var. *simplex* 234
 fruticosa 233
 intermedia 233
 monspeliensis 232
 var. *norvegica* 232
 norvegica 232
 pacifica 234
 palustris 233
 pumila 234
 recta 233
 simplex 234
 sulphurea 233
 tridentata 233
 Poterium
 canadense 241
 Sanguisorba 241
 Pot-herb Mustard 203
 Poverty Grass 283
 Powder-horn 177
 Prairie Rose 242
 Willow 140
 Prenanthes 413
 alba 413
 altissima 413
 var. *hispidula* 413
 serpentaria 413
 trifoliolata 413
 Pretty Nancy 179
 Prickly Ash 262
 Cleome 212
 Clothur 391
 Gooseberry 217
 Lettuce 411
 Pear 289
 Poppy 197
 Prickly
 Saltwort 169
 Pride of the Meadow 235
 Prim 319
 Primrose
 Common Evening 292
 Evening 292
 Primrose Family 315
 Primrose-leaved Violet 287
 Primulaceae 315, 438, 440
 Prince's Feather 162, 169, 170
 Pine 306
 Privet 319
 Proboscis Flower 360
 Proserpinaca 295
 palustris 295
 Prostrate Amaranth 170
 Provence Rose 243
 Prunella 335
 vulgaris 335
 Prunus 243, 441
 allegghaniensis 244
 americana 246
 avium 245
 Cerasus 245
 cuneata 245
 domestica 246
 Gravesii 245
 instititia 244
 Mahaleb 245
 maritima 244
 nigra 246
 pennsylvanica 244
 Persica 246
 pumila 245
 serotina 243
 spinosa
 var. *instititia* 244
 virginiana 244
 Psamma 65
 Psedera 276
 quinquefolia 276
 var. *hirsuta* 276
 vitacea 276
 Ptelea 263
 trifoliata 263

- Pteridium*
aquilinum 18.
Pteris 18
aquilina 18
Ptilimnium 299
capillaceum 299
Puccinellia 75
angustata 75
Borreri 75
distans 75
maritima
var. minor 75
Puccoon 329
Red 196
White 196
Yellow 193
Pulse Family 246
Pumpkin 372
Art 371
Purple Amaranth 170
Angelica 303
Avens 235
Azalea 308
Bladderwort 358
Boneset 375
Chokeberry 223
Cinquefoil 233
Clematis 190
Cone-flower 393
Cress 210
Eragrostis 71
Five-finger 233
Flowering Raspberry 237
Gerardia 355
Hardhack 221
Loosestrife 290
Meadow Rue 188
Milkweed 322
Milkwort 264
Oat 72
Petunia 340
Rocket 208
Stramonium 348
Trillium 124
Virgin's Bower 190
Wild Raspberry 236
Willow 141
Purple-wort 233
Purplish Cudweed 390
Purslane 182
French 182
Garden 182
Marsh 291
Milk 266
Mud 282
Sea 175
Water 291
Purslane Family 182
Speedwell 354
Pusley 182
Pussy Willow 139
Pussy's Toes 388
Putty-root 136
Pycnanthemum 340
aristatum 428
clinopodioides 340
flexuosum 340
incanum 341
lanceolatum 340
linifolium 340
muticum 341
var. pilosum 340
pilosum 340
verticillatum 341
virginianum 340
Pygmy Weed 214
Pyrola 306
americana 307
chlorantha 306
elliptica 307
rotundifolia 307
secunda 306
Pyrola
One-flowered 306
Pyrus 222
americana 223
arbutifolia 222
var. atropurpurea 223
" *melanocarpa* 223
Aucuparia 223
baccata 222
communis 222
Cydonia 224
Malus 222

- Pyrus
 melanocarpa 223
 prunifolia 222
 Quack Grass 79
 Quaking Aspen 141
 Grass 72
Quamoclit
 coccinea 324
 Quassia Family 263
 Queen of the Meadow 221, 235, 375
 Queen of the Prairie 234
 Quercitron Oak 152
 Quercus 149, 441
 acuminata 150
 alba 149
 bicolor 150
 coccinea 151
 var. *tinctoria* 152
 ilicifolia 152
 macrocarpa 150
 minor 150
 Muhlenbergii 150
 nana 152
 palustris 151
 platanoides 150
 prinoides 151
 Prinus 151
 rubra 151
 stellata 150
 velutina 151, 152
 Quicksilver Weed 188
 Quillwort 32
 Quillwort Family 32
 Quince 224
 Common 224
 Japan 224
 Quinsy-berry 218
 Quitch Grass 79
 Quiver-leaf 141
 Rabbit-foot Clover 248
 Raccoon-berry 194
 Radicula 206
 Armoracia 207
 Nasturtium-aquaticum 206
 palustris 207
 var. *hispidus* 207
 sylvestris 207
 Radish 202
 Garden 202
 Wild 202
 Ragged Jack 178
 Lychnis 178
 Orchis 132
 Robin 178
 Sailor 162
 Ragweed 391
 Golden 404
 Great 391
 Ragwort 403, 404
 Golden 404
 Raisin
 Wild 369
 Ramsted 350
 Ranunculaceae 184, 437, 440
 Ranunculus 184, 441
 abortivus 186
 var. *eucyclus* 186
 " *micranthus* 186
 acris 187
 var. *Steveni* 187
 allegheniensis 186, 421
 ambigens 185
 aquatilis
 var. *capillaceus* 184
 " *trichophyllus* 184
 bulbosus 187
 circinatus 184
 Cymbalaria 185
 delphinifolius 185
 var. *terrestris* 185
 divaricatus 184
 fascicularis 187
 Flammula 426
 var. *reptans* 185
 hispidus 187
 laxicaulis 185
 micranthus 186
 multifidus 185
 obtusiusculus 185
 pennsylvanicus 187
 recurvatus 186
 repens 187
 reptans 185

- Ranunculus**
 sceleratus 186, 421
 septentrionalis 187
Rape 204
Raphanus 202
 Raphanistrum 202
 sativus 202, 431
Raspberry
 Black 237
 Dwarf 237
 European Red 236
 Purple Flowering 237
 " Wild 236
 Red 236
 Running 237
 Wild Red 236
Ratibida
 pinnata 393
Rattle 357
 Yellow 357
Rattle Bags 180
 Cohosh 192
 Snakeroot 192
Rattle-box 248, 357
Rattlesnake Fern 28
 Grass 74
 Master 297
 Plantain 134
Rattlesnake-root 413
Rattlesnake-weed 414
Rattle-top 192
Razoumofskya
 pusilla 156
Red Ash 318
 Baneberry 193
 Benjamin 124
 Blite 166
 Campion 178
 Cedar 38
 Cherry 245
 Chokeberry 223
 Clover 248
 Cohosh 193
 Columbine 192
 Currant 219
 Elm 152
 Goosefoot 166
 Red
 Gum 220
 Haw 225
 Indian Paint 196
 Ink Plant 171
 Lily 120
 Lychnis 178
 Maple 273
 Mulberry 154
 Oak 151
 Pepper 344
 Pine 35
 Poppy 197
 Puccoon 196
 Raspberry 236
 Robin 178, 261
 Rose 243
 Snakeroot 193
 Sorrel 159
 Spruce 36
 Top 64
 Trillium 124
 Red-beads 193
 Red-berried Elder 369
 Redbud 247
 Red-osier Cornel 305
 Dogwood 305
 Red-root 126, 196, 275
 Red-seeded Dandelion 410
 Red-shank 162
 Red-stalked Aster 386
 Reed 70
 Sea Sand 65
 Kein Orchis 130
 Reseda 212
 alba 212, 431
 lutea 212
 Luteola 212, 433
 odorata 212, 433
 Resedaceae 212, 437, 440
 Rhamnaceae 275, 438, 440
 Rhamnus 275
 alnifolia 275
 cathartica 275
 Rheumatism-root 126
 Rhoxia 290
 virginica 290

- Rhinanthus 357
 Crista-galli 357
 minor 357
Rhode Island Bent 64
Rhododendron 307
 arborescens 427
 canadense 308
 canescens 308
 maximum 308
 nudiflorum 308
 Rhodora 308
 viscosum 307
 var. *glaucum* 308
 " *nitidum* 308
Rhodora
 canadensis 308
Rhus 268
 aromatica 269
 canadensis 269
 copallina 268
 glabra 268
 hirta 268
 radicans 269
 Toxicodendron 269
 var. *radicans* 269
 typhina 268
 venenata 268
 Vernix 268
Rib Grass 361
Ribbon Grass 59
Ribes 217, 441
 americanum 218
 aureum 219
 Cynosbati 217
 floridum 218
 gracile 217
 Grossularia 218
 lacustre 218
 missouriense 217
 nigrum 218, 434
 odoratum 219
 oxyacanthoides 218
 prostratum 219
 rotundifolium 218
 rubrum 219
 Uva-crispa 218
 vulgare 219
Ribwort 360
Rice
 False 58
 Indian 58
 Mountain 59
 Tuscarora 74
 Water 58
 Wild 58
Richweed 156, 344
Ricinus 265
 communis 265, 430
Ring Willow 139
Ripple Grass 361
River Ash 318
 Bulrush 86
 Weed 213
 " Family 213
River-bank Grape 277
 Willow 139
Roadside Peppergrass 200
Robin Runaway 334
Robinia 251
 hispida 251
 Pseudo-Acacia 251
 viscosa 251
Robin's Plantain 387
Rock Brake 19
 Cress 210
 Crowfoot 186
 Elm 152
 Lily 192
 Maple 272
 Sandwort 175
 Woodsia 24
Rockrose 282
Rockrose Family 282
Rocket 206
 American Sea 202
 Crambling 212
 Dame's 206
 Dyer's 212
 Purple 208
 Sand 204
 Sea 202
 Sweet 206
 Wall 204
 Yellow 207

Rocket Cress 207

Larkspur 192

Roman Wormwood 391, 402

*Roripa**Armoracia* 207*hispida* 207*Nasturtium* 206*palustris* 207*sylvestris* 207

Rosa 242, 441

blanda 242

canina 242

carolina 243

cinnamomea 242

gallica 243

humilis 243

lucida 243

nitida 243

rubiginosa 242

var. micrantha 243

rugosa 242

setigera 242, 422

spinosissima 242, 422

virginiana 243

Rosaceae 220, 437, 440

Rose 242

African 197

Brier 242

Burnet 242

California 324

Canker 197, 242

Cinnamon 242

Climbing 242

Corn 197

Dog 242

Dwarf Wild 243

Early Wild 242

French 243

Hip 242

Japanese 236, 242

Kitchen 242

Large Wild 243

Low Wild 243

Marsh Holy 310

Meadow 242

Musk 279

Northeastern 243

Rose

Pasture Wild 243

Prairie 242

Provence 243

Red 243

Scotch 242

Shining 243

Swamp Wild 243

Thornless 242

Wild 243

Rose Acacia 251

Bay 308

Campion 177

Family 220

Mallow 279

Moss 182

Pink 177

Pogonia 132

Willow 141

Rose of Sharon 279

Rosemary

Bog 310

Marsh 310, 314

Rosin-weed 390

Rotala 289

ramosior 289

Rough Avens 235

Bedstraw 362

Bent 64

Boneset 376

Cinquefoil 232

Comfrey 329

Crowfoot 186

Pigweed 169

Round-headed Anemone 190

Round-leaved Anemone 190

Cornel 304

Dogwood 304

Shin Leaf 307

Sundew 213

Violet 287

Rowan Tree 223

Royal Fern 26

Rubiaceae 361, 438, 441

Rubus 236, 441

allegheniensis 237

var. Gravesii 238

Rubus

- americanus* 237
- amnicolus* 238
- Andrewsianus 239
- argutus*
 - var. *Randii* 238
- arundelanus* 238
- Baileyanus* 240
- canadensis* 239
- cuneifolius* 238
- Enslenii* 240
- floricomus* 239
- frondosus* 238
- hispidus* 239
 - var. *suberectus* 239
- idaeus* 236
 - var. *aculeatissimus* 236
 - " *strigosus* 236
- invisus* 426
- laciniatus* 238
- neglectus* 236
- nigricans* 239
- nigrobaccus* 237
- occidentalis* 237
 - forma *pallidus* 237
- odoratus* 237
- orarius* 238
- pergratus* 238
- philadelphicus* 238
- phoenicolasius* 237
- procumbens* 239
- Randii* 238
- recurvans* 238
- recurvicaulis* 238
- semisetosus* 239
- setosus* 239
- strigosus* 236
- subuniflorus* 240
- triflorus* 237
- vermontanus* 239
- villosus* 237, 239, 426
 - var. *frondosus* 238
 - " *humifusus* 240

Rudbeckia 392

- hirta* 393
- laciniata* 393
- speciosa* 393

Rudbeckia

- subtomentosa* 393
- triloba* 392

Rue

- Common Meadow 188
- Early Meadow 188
- Goat's 251
- Meadow 188
- Purple Meadow 188
- Tall Meadow 188
- Wax-leaved Meadow 188

Rue Anemone 189

- Family 262

Spleenwort 20**Rum Cherry** 243**Rumex** 157, 441

- Acetosa* 159
- Acetosella* 159
- altissimus* 158
- Britannica* 158
- crispus* 158
- elongatus* 158, 420
- maritimus* 426
- mexicanus* 158
- obtusifolius* 159
- Patientia* 157
- persicarioides* 426
- salicifolius* 158
- sanguineus* 426
- verticillatus* 158

Runaway Robin 343**Running Blackberry** 239

- Brier 239

Buttercup 234

- Pine 31

Raspberry 237**Swamp Blackberry** 239**Ruppia** 44

- maritima* 44

Rush 114

- Beak 90

Bog 114, 115**Candle** 115**Chair-maker's** 86**Club** 85**Common** 115**Hairy Wood** 117

- Rush
 Horned 90
 Knotted 116
 Nut 91
 Scouring 29
 Slender 114
 Soft 115
 Spike 83
 Three-square 86
 Toad 114
 Twig 91
 Wood 117
 Yard 114
 Rush Family 114
 Grass 63
 Russian Clover 252
 Thistle 169
 Rusty Woodsia 24
 Rutabaga 203
 Rutaceae 262, 437, 440
 Rye 79
 Nodding Wild 80
 Slender Wild 81
 Wild 80
 Rynchospora 90
 alba 90
 var. *macra* 418
 capillacea 425
 corniculata
 var. *macrostachya* 90
 fusca 90
 glomerata 91
 macrostachya 90
 Sabatia 319
 campestris 319, 434
 chloroides 319
 dodecandra 319
 stellaris 319
 Sacaline 164
 Sacred Bean 184
 Saddle Tree 194
 Sage 337
 Garden 337
 Lyre-leaved 337
 Meadow 337
 Scarlet 338
 Wild 376
 Sage
 Wood 332
 Sage Willow 140
 Sagina 174
 apetala 174
 decumbens 174
 procumbens 174
 Sagittaria 45
 arifolia 46
 calycina 47
 var. *spongiosa* 47
 cristata 46
 cuneata 46
 Eatoni 46
 Engelmanniana 46
 gracilis 46
 graminea 46
 hastata 46
 heterophylla 46
 var. *elliptica* 46
 " *rigida* 46
 latifolia 46
 forma diversifolia 46
 " *gracilis* 46
 " *hastata* 46
 " *obtusata* 46
 longirostra 45
 natans
 var. *gracillima* 47
 " *lorata* 46
 obtusata 46
 pusilla 46
 rigida 46
 subulata 46
 var. *gracillima* 47
 variabilis 46
 var. *diversifolia* 46
 " *gracilis* 46
 Sailor's Tobacco 401
 St. John's-wort 280
 Common 280
 Dwarf 281
 Great 280
 Marsh 282
 Pale 281
 Shrubby 281
 St. John's-wort Family 280

- St. Lucie Cherry 245
 Salad Burnet 241
 Salicaceae 137, 436, 439
 Salicornia 168
 ambigua 168
 Bigelovii 168
 europaea 168
 herbacea 168
 mucronata 168
 Salix 137, 441
 acutidens 139
 alba
 var. *vitellina* 138
 babylonica 139
 Bebbiana 140
 candida 140
 var. *denudata* 141
 cordata 139
 var. *angustata* 139
 " *myricoides* 139
 discolor 139
 var. *eriocephala* 140, 420
 " *prinoides* 140, 420
 eriocephala 140
 fluvialis 139
 fragilis 138
 humilis 140
 incana 141, 433
 longifolia 139
 lucida 138
 myrtilloides 139
 nigra 137
 var. *falcata* 137
 pedicellaris 139
 pentandra 138
 petiolaris 426
 prinoides 140
 purpurea 141
 rostrata 140
 sericea 140
 serissima 138
 subsericea 420
 tristis 140
 Salomonia
 biflora 123
 commutata 123
 Salsify 410
 Salsola 169
 Kali 169
 var. *caroliniana* 421
 " *tenuifolia* 169
 salsa
 var. *americana* 169
 Tragus 169
 Salt Marsh Grass 68
 Meadow Grass 68
 Reed Grass 68
 Saltwort 169
 Common 169
 Prickly 169
 Salvia 337
 lyrata 337
 officinalis 337
 pratensis 337, 432
 splendens 338, 432
 Sambucus 369
 canadensis 369
 pubens 369
 racemosa 369
 Samolus 315
 floribundus 315, 427
 Valerandi 427
 var. *americanus* 315
 Samphire 168
 Woody 168
 Sand Bar Willow 139
 Blackberry 238
 Brier 345
 Bur 346
 Cherry 245
 Grass 70
 Jointweed 164
 Mustard 204
 Rocket 204
 Spurrey 173
 Sandalwood Family 156
 Sandbur 58
 Sand-weed 173
 Sandwort 173, 174
 Blunt-leaved 174
 Common 175
 Large-leaved 174
 Mountain 175
 Rock 175

- Sandwort
 Sea Beach 175
 Seaside 173
 Showy 174
 Thyme-leaved 175
 Sanguinaria 196
 canadensis 196
 Sanguisorba 241
 canadensis 241
 minor 241, 434
 Sanguisorba 241
 Sanicle 297
 American 215
 Sanicle-leaved Crowfoot 186
 Sanicula 297
 canadensis 297
 gregaria 297
 marilandica 297
 var. *canadensis* 297
 trifoliata 297
 Santalaceae 156, 436
 Sapindaceae 274, 438, 440
 Saponaria 180
 inflata 430
 officinalis 180
 Vaccaria 180
Sarothra
 gentianoides 282
 Sarracenia 213
 purpurea 213
 Sarraceniaceae 213, 437
 Sarsaparilla
 American 296
 Bristly 296
 False 296
 Wild 296
 Yellow 194
 Sassafras 195
 officinale 195
 Sassafras 195
 variifolium 195
 Satin-flower 208
 Satureja 339
 hortensis 428
 vulgaris 339
 Saururus 137
 cernuus 137
 Savastana
 Nashii 59
 odorata 59
 Savin 38
 Savory 339
 Saw Brier 125
 Saxifraga 215
 pennsylvanica 215
 virginiensis 215
 Saxifragaceae 215, 437, 440
 Saxifrage 215
 Early 215
 Golden 216
 Spring 215
 Swamp 215
 Saxifrage Family 215
 Saxifrax 195
Scabiosa
 arvensis 371
 Scabious
 Field 371
 Sweet 387
 Scallop Squash 372
 Scarlet Oak 151
 Painted Cup 356
 Sage 338
 Scheuchzeria 45
 palustris 45
 Schizaeaceae 26, 435
 Schwalbea 357
 americana 357
 Scirpus 85, 441
 alpinus 86
 americanus 86
 atrocinctus 89
 var. *brachypodus* 89
 atrovirens 87, 88, 418
 campestris 87
 var. *novae-angliae* 87
 " *paludosus* 87
 cyperinus 88
 var. *Andrewsii* 88
 " *condensatus* 88
 " *Eriophorum* 88
 " *pelius* 88, 418
 debilis 86
 Eriophorum 88

- Scirpus**
fluviatilis 87
georgianus 88
Hallii 425
hudsonianus 86
lacustris 86
lineatus 88
maritimus 87
nanus 85
novae-angliae 87
Olneyi 86
 var. *contortus* 86
paludosus 87
pedicellatus 88
 var. *pullus* 89
planifolius 85
polyphyllus 88
 var. *macrostachys* 88
pungens 86
robustus 87
rubrotinctus 87, 418
Smithii 86
subterminalis 86
supinus
 var. *Hallii* 425
sylvaticus 87
 var. *Bissellii* 87
 " *digynus* 87
Torreyi 86
validus 86
Scleranthus 172
annuus 172
Scleria 91
pauciflora 91
 var. *caroliniana* 91
reticularis
 var. *pubescens* 430
triglomerata 91
verticillata 91
Scoke
 Common 171
Scorpion Grass 329
Scotch Broom 248
 Fir 35
 Lovage 301
 Pine 35
 Pink 181
 Rose 242
Scotch
 Thistle 407
Scott's Spleenwort 19
Scouring Rush 29
Scratch Grass 58, 163
Scrofula Plant 351
Scrophularia 351
 leporella 351
 marilandica 351
 nodosa
 var. *marilandica* 351
Scrophulariaceae 349, 438, 440
Scurvy Grass 208
Scutch Grass 69, 79
Scutellaria 333
 galericulata 333
 integrifolia 333
 lateriflora 333
 parvula 333
 var. *ambigua* 333
 saxatilis 428
Sea Beach Sandwort 175
Blite 168
Chickweed 175
Cole 202
Lavender 314
Parsley 301
Pink 319
Purslane 175
Rocket 202
Seaside Crowfoot 185
Gerardia 356
Goosefoot 169
Jointweed 164
Plantain 361
Sandwort 173
Spurge 265
Spurrey 173
Secale 79
 cereale 79, 431
Sedge 91
Sedge Family 81
Sedum 214
 acre 214
 purpureum 214
 Telephium 214
 ternatum 214

- Sedum**
 triphyllum 214
Seedbox 291
Selaginella 32
 apus 32
 rupestris 32
Selaginellaceae 32, 436
Self-heal 335
 Common 335
Sempervivum 215
 tectorum 215
Seneca Grass 59
 Snakeroot 264
Senecio 403
 aureus 404
 var. *Balsamitae* 404
 " *obovatus* 404
 Balsamitae
 var. *praelongus* 404
 obovatus 404
 viscosus 404
 vulgaris 403
Senega Snakeroot 264
Senna 247
 American 247
 Wild 247
Sensitive Fern 25
 Pea 247
 Plant
 Wild 247
Sericocarpus 388
 asteroides 388
 conyzoides 388
 linifolius 388
 solidagineus 388
Service Berry 224
 Tree 223
Sesame Grass 48
Setaria 57
 glauca 57
 imberbis 430
 var. *perennis* 57
 italica 57
 var. *germanica* 57
 verticillata 57
 viridis 57
Shad Bush 224
Shad-flower 199
Shade Elm 152
Shag-bark Hickory 145
Shamrock
 Water 320
Shave Grass 30
Shear Grass 79
Sheep Laurel 309
 Sorrel 159
Sheepberry 369
Sheep's Fescue 76
Sheep's-bit 373
Shell-bark Hickory 145
Shepherd's Purse 201
 Sprouts 201
Shield Fern 22
Shin Leaf 306, 307
 Round-leaved 307
Shining Rose 243
 Sumach 268
 Willow 138
Shirley Poppy 197
Shore Knotweed 160
Showy Lady's Slipper 129
 Orchis 130
 Portulaca 182
 Sandwort 174
Shrubby Althaea 279
 Bitter-sweet 271
 Cinquefoil 233
 St. John's-wort 281
 Trefoil 263
Sibbaldiopsis
 tridentata 233
Siberian Aster 386
 Crab 222
Sickle Grass 163
Sickle-pod 211
Sicyos 372
 angulatus 372
Sida 278
 spinosa 278, 434
Side-saddle Flower 213
Sideritis 334
 montana 334, 434
Sieglingia
 purpurea 70

- Sieglingia*
seslerioides 70
Silene 179
antirrhina 179
 var. divaricata 179
Armeria 179
caroliniana 179
Cucubalus 180
dichotoma 179
inflata 430
latifolia 180
nivea 426
noctiflora 179, 421
pennsylvanica 179
stellata 180
vulgaris 180
Silk Grass 64
Silkweed 322
 Common 322
Silkworm Mulberry 154
Silky Cornel 305
 Willow 140
Silphium 390
 perfoliatum 390
Silver Maple 273
 Weed 234, 274
Silver-leaf Poplar 141
Silvery Cinquefoil 233
 Spleenwort 21
Simarubaceae 263, 437, 440
Sinapis
 alba 202
Sisymbrium 205
 Alliaria 205
 altissimum 205
 canescens 205, 433
 Loeselii 205
 officinale 205
 var. leiocarpum 205
 Sophia 205, 433
 Thalianum 206
Sisyrinchium 128
 albidum 128, 431
 anceps 128
 angustifolium 128
 atlanticum 129
 gramineum 128
 Sisyrinchium
 graminoides 128
 intermedium 128
 mucronatum 128
Sium 300
 Carsonii 300
 cicutaefolium 300
 lineare 300
Skevisch 387
Skullcap 333
 Mad-dog 333
 Marsh 333
Skunk Cabbage 110
 Currant 219
 Grape 276
 Spruce 36
Sleepy Catchfly 179
Slender Fescue 76
 Knotweed 160
 Nettle 155
 Pigweed 169
 Rush 114
 Vetch 256
Slippery Elm 152
Sloe 244, 369
Slough Grass 68
Small Agrimony 241
 Alyssum 200
 Cranberry 314
 Green Wood Orchis 131
 Nettle 155
 Pale Green Orchis 130
 Red Morning Glory 324
 Snapdragon 351
 Solomon's Seal 123
Smaller Bladderwort 358
Small-flowered Cranesbill 262
 Crowfoot 186
 Geranium 262
 Pearlwort 174
 Sweetbrier 243
Small-fruited Hickory 145
Smartweed 162
 Common 162
 Water 162
Smilacina 122
 racemosa 122

- Smilacina
 stellata 122
 trifolia 123, 419
 Smilax 125
 glauca 125
 herbacea 125
 hispida 125
 rotundifolia 125
 Smooth Alder 148
 Crowfoot 186
 Gooseberry 218
 Solomon's Seal 123
 Sumach 268
 Winterberry 270
 Yellow Violet 288
 Smooth-fruited Poppy 197
 Snake Grass 71
 Mouth 132
 Snake-berry 193
 Snakehead 352
 Snake-leaf 121
 Snakeroot 157
 Black 192, 297
 Button 297, 377
 Fine 157
 Heart 157
 Rattle 192
 Red 193
 Seneca 264
 Senega 264
 Virginia 157
 White 193, 376, 377
 Snapdragon 351
 Small 351
 Snapdragon Catchfly 179
 Snapping Alder 219
 Snap-weed 274
 Snap-wood 196
 Sneezeweed 398
 Snowball 367, 368
 Snowberry 366, 367
 Creeping 312
 Snowdrift 199
 Snowdrop 190
 Snow-on-the-Mountain 266
 Soapberry Family 274
 Soapwort 180
 Field 180
 Soft Agrimony 241
 Chess 77
 Maple 273
 Rush 115
 Solanaceae 344, 438, 440
 Solanum 344
 carolinense 345
 Dulcamara 345
 nigrum 345
 rostratum 346
 tuberosum 344, 432
 Soldier's Cap 198
 Soldiers on the Green 356
 Solidago 378, 441
 altissima 380
 arguta 379
 aspera 380
 asperula 380
 bicolor 378
 var. *concolor* 378
 caesia 378
 var. *axillaris* 378
 " *paniculata* 378
 canadensis 380
 var. *glabrata* 380
 " *scabra* 380
 " *scabriuscula* 380
 Elliottii 380
 flexicaulis 378
 graminifolia
 var. *Nuttallii* 381
 hispida 378
 juncea 379
 var. *ramosa* 379
 lanceolata 381
 latifolia 378
 neglecta 379
 var. *linoides* 379
 nemoralis 380
 odora 379
 patula 379
 puberula 378
 rigida 381
 rugosa 380
 var. *sphagnophila* 380

Solidago

- sempervirens* 379
- serotina* 381
 - var. *gigantea* 381
- speciosa* 379
- squarrosa* 378
- stricta* 429
- tenuifolia* 381
- uliginosa* 379
- ulmifolia* 380
- uniligulata* 379

Solomon's Seal 123

- False 122
- Giant 123
- Great 123
- Hairy 123
- Small 123
- Smooth 123
- Star-flowered 122
- Three-leaved 122
- Two-leaved 123

Sonchus 411

- arvensis* 411
- asper* 411
- oleraceus* 411

Sophia

- pinnata* 205
- Sophia* 205

Sorbaria 221

- sorbifolia* 221

Sorbus

- americana* 223
- Aucuparia* 223

Sorghastrum 49

- avenaceum* 49
- nutans* 49

Sorghum 49

- halepense* 49, 416, 433

Sorrel 159

- Cock 159
- Common 159
 - " Wood 260
- Cow 159
- Field 159
- Garden 159
- House 159
- Lady's 261

Sorrel

- Meadow 159
- Red 159
- Sheep 159
- Slender Yellow Wood 260
- Tall Yellow Wood 261
- Violet Wood 260
- White Wood 260
- Wood 260
- Yellow Wood 260

Sorrel Dock 159**Sour Cherry 245**

- Grass 159
- Gum 305

Sour-top Blueberry 313**Southernwood 401****Sow Bindweed 163**

- Thistle 411

Sowbane 166, 167**Sowna Millet 56****Spanish Bayonet 121**

- Buttons 407

- Needles 397

Sparganiaceae 39, 436**Sparganium 39**

- americanum* 39
 - var. *androcladum* 40
- androcladum* 40
 - var. *fluctuans* 40
- angustifolium* 40, 422
- diversifolium* 40
 - var. *acaule* 40
- eurycarpum* 39, 416
- fluctuans* 40, 423
- lucidum* 40
- minimum* 40
- simplex* 40
 - var. *androcladum* 40
 - " *angustifolium* 40
 - " *fluitans* 40
 - " *Nuttallii* 39

Spartina 68

- cynosuroides* 68
- glabra* 68
 - var. *alterniflora* 68
 - " *pilosa* 68
- juncea* 68

- Spartina*
Michauxiana 68
patens
 var. *caespitosa* 69, 417
 var. *junceae* 68
polystachya 68
stricta
 var. *alterniflora* 68
 " *glabra* 68
Spathyema
foetida 110
 Spatter-dock 183
 Spear Grass 72, 73
 Spearmint 342
 Spearwort 185
 Crawling 185
 Creeping 185
 Water Plantain 185
 Speckled Alder 148
 Specularia 372
 perfoliata 372
 Speedwell 353, 354
 Common 354
 Corn 354
 Creeping 354
 Ivy-leaved 355
 Marsh 354
 Purslane 354
 Swamp 354
 Thyme-leaved 354
 Spergula 173
 arvensis 173
 sativa 174
 Spergularia 173
 canadensis 421
 marina 173
 rubra 173
 Sphenopholis 66
 nitida 66
 obtusata 66
 var. *pubescens* 66
 pallens 66
 var. *major* 66
 palustris 66
 Spice Bush 196
 Spice-wood 196
 Spider Lily 113
 Spider-flower 212
 Spiderwort 113
 Spiderwort Family 113
 Spignet 296
 Spike Grass 72
 Rush 83
 Spiked Loosestrife 290
 Spikenard 296
 American 296
 False 122
 Wild 122
 Spinach
 New Zealand 173
 Strawberry 166
 Wild 166
 Spindle Tree 271
 European 271
 Spiny Amaranth 170
 Clotbur 391
 Spiraea 221
 chamaedrifolia 221
 var. *ulmifolia* 221
Filipendula 235
 japonica 221
 latifolia 221
 lobata 234
 prunifolia 221
 salicifolia 221
 sorbifolia 221
 tomentosa 221
 Ulmaria 235
 Spiraea
 Ash-leaved 221
 Spiranthes 133
 Beckii 133
 cernua 134
 var. *ochroleuca* 134, 420
 gracilis 133
 latifolia 134
 lucida 134
 praecox 133
 Romanzoffiana 134
 simplex 133
 vernalis 133
 Spires Grass 59
 Spirodela 111
 polyrhiza 111

- Spleenwort 19
 Ebony 20
 Maidenhair 20
 Mountain 20
 Narrow-leaved 20
 Pinnatifid 19
 Rue 20
 Scott's 19
 Silvery 21
 Spoon-wood 309
 Sporobolus 63
 asper 63
 clandestinus 63
 cryptandrus 63
 heterolepis 63
 longifolius 63
 neglectus 63
 serotinus 63
 uniflorus 63
 vaginiflorus 63
 Spotted Alder 219
 Cowbane 299
 Loosestrife 315
 Medick 250
 Mint 343
 Parsley 298
 Touch-me-not 274
 Wintergreen 306
 Spotted-leaf Buttercup 187
 Crowfoot 187
 Spreading Dogbane 321
 Globeflower 191
 Orach 167
 Spring Anemone 190
 Beauty 182
 Cress 209, 210
 Dock 157
 Mouse-ear 177
 Saxifrage 215
 Vetch 255
 Spruce 36
 Black 36
 Bog 36
 Cat 36
 Norway 36
 Red 36
 Spruce
 Skunk 36
 White 36
 Spurge 265, 267
 Caper 267
 Cypress 267
 Flowering 266
 Ipecac 266
 Leafy 266
 Myrtle 267
 Petty 267
 Seaside 265
 Spurge Family 265
 Spurrey 173
 Common 173
 Corn 173
 Field 174
 Salt Marsh Sand 173
 Sand 173
 Seaside 173
 Spurrey Pearlwort 174
 Squash 372
 Canada 372
 China 372
 Hubbard 372
 Marrow 372
 Scallop 372
 Summer Crookneck 372
 Winter Crookneck 372
 Squaw Huckleberry 313
 Vine 364
 Squaw-root 192, 195, 359
 Squaw-weed 403, 404
 Swamp 404
 Squirrel Brier 125
 Corn 198
 Squirrel-ear 134
 Squirrel-tail Grass 80
 Stachys 337
 aspera 337
 cordata 428
 hyssopifolia 337
 palustris 337
 var. *cordata* 428
 var. *homotricha* 337
 tenuifolia
 var. *aspera* 337, 428

- Staff Tree 271
 Staff Tree Family 271
 Stag-bush 369
 Stagger-bush 310
 Staggerwort 398
 Staghorn Sumach 268
 Staphylea 272
 trifolia 272
 Staphyleaceae 272, 437
 Star Cucumber 372
 Flower 316
 Grass 125, 127
 Thistle 407
 Star of Bethlehem 121
 Star-flowered Solomon's Seal 122
 Star-leaved Gum 220
 Starry Campion 180
 Starwort 175, 382
 Greater 176
 Lesser 176
 Long-leaved 175
 Mountain 175
 Northern 175
 Water 267
Statice
 Limonium
 var. *caroliniana* 314
 Steeple Bush 221
 Steironema 316
 ciliatum 316
 lanceolatum 316
 Stellaria 175
 borealis 175
 graminea 176
 var. *lanceolata* 176
 Holostea 176
 longifolia 175
 media 176
 pubera 426
 Stemless Lady's Slipper 129
Stenophragma
 Thaliana 206
 Stenophyllus 85
 capillaris 85
 Stickseed 240, 328
 Stick-tight 396
 Stiff Water Crowfoot 184
 Stinging Nettle 155
 Stingless Nettle 156
 Stink Grass 71
 Stipa 60
 avenacea 60
 Stitchwort
 Greater 176
 Lesser 176
 Long-leaved 175
 Northern 175
 Stone Clover 248
 Stonecrop 214
 Biting 214
 Ditch 214
 Mossy 214
 Virginia 214
 Wild 214
 Stone-root 344
 Stone-seed 329
 Storksbill 262
 Musk 262
 Stramonium 347
 Purple 348
 Strawberry 231
 American Wood 232
 Barren 232
 Bog 233
 Dry 232
 European Wood 231
 Field 231
 Indian 232
 Mock 232
 Wild 231, 232
 Yellow 232, 234
 Yellow-flowered 232
 Strawberry Blite 166
 Spinach 166
 Tomato 346
 Streptopus 123
 amplexifolius 123
 roseus 123
 Striped Maple 272
 Strophostyles 258
 angulosa 258
 helvola 258
 Stubbleberry 345
 Suaeda 168

Suaeda
 linearis 169
 maritima 168
Succory 408
Sugar Maple 272
 Pear 224
Sugarberry 153
Sumach 268
 Black 268
 Dwarf 268
 Mountain 223
 Poison 268
 Shining 268
 Smooth 268
 Staghorn 268
 Sweet-scented 269
Summer Anemone 190
 Grape 276, 277
 Lilac 206
 Snowflake 126
Sundew 213
 Long-leaved 213
 Round-leaved 213
Sundew Family 213
Sundial 248
Sunflower 394
 Common 394
 Tickseed 397
 Wild 395
Sun-plant 182
Swallow-wort 196
 Black 323
Swamp Ash 318
 Beggar-ticks 396
 Bilberry 313
 Birch 148
 Blueberry 313
 Buttercup 187
 Crowfoot 187
 Dock 158
 Dogwood 305
 Elm 152
 Globeflower 191
 Gooseberry 218
 Hickory 145
 Laurel 309
 Loosestrife 289

Swamp
 Lousewort 357
 Maple 273
 Milkweed 322
 Poplar 142
 Saxifrage 215
 Spanish Oak 151
 Speedwell 354
 Squaw-weed 404
 Thistle 406
 White Oak 150
Sweatweed 278
Swedish Clover 249
Sweet Allison 199
 Alyssum 199
 Birch 147
 Cherry 245
 Chervil 298
 Cicely 298
 Clover 249
 Coltsfoot 157, 402
 Currant 219
 Elm 152
 Everlasting 390
 Fern 144
 Flag 111
 Gale 143
 " Family 143
 Golden-rod 379
 Gum 220
 " Tree 220
 Pepperbush 306
 Pigweed 165
 Rocket 206
 Scabious 387
 Susan 179
 Vernal Grass 59
 Viburnum 369
 Violet 287
 White Violet 287
 William 181, 326
Sweetbrier 242
 Small-flowered 243
Sweet-scented Bedstraw 363
 Sumach 269
Switch Grass 52
Sword Grass 59, 98

- Sycamore 220
 American 220
 False 220
 Sycamore Maple 272
 Symphoricarpos 366
 orbiculatus 366
 racemosus 367
 var. *laevigatus* 367
 Symphoricarpos 366
 vulgaris 366
 Symphytum 328
 asperrimum 329
 officinale 328
 tuberosum 328
 Symplocarpus 110
 foetidus 110
 Syndesmon
 thalictroides 189
 Synosma
 suaveolens 403
 Syntherisma
 filiformis 49
 fimbriata 50
 linearis 49
 sanguinalis 50
 Syringa 318
 vulgaris 318
 Syringa 217
 Large-flowered 217
 Tacamahac 142
 Taenidia 301
 integerrima 301
 Tag Alder 148
 Talinum
 teretifolium 426
 Tall Anemone 190
 Blueberry 313
 Buttercup 188
 Cinquefoil 232
 Cone-flower 393
 Crowfoot 188
 Dock 158
 Leafy Green Orchis 130
 Meadow Rue 188
 Red Top 70
 Thistle 406
 White Bog Orchis 130
 Tall
 Wild Nettle 155
 Taller Fescue 76
 Tamarack 35
 Tanacetum 400
 vulgare 400
 var. *crispum* 400
 Tansy 400
 Common 400
 Wild 234
 Tansy Mustard 205
 Tape Grass 47
 Taraxacum 410
 erythrospermum 410
 officinale 410
 var. *palustre* 410
 Taraxacum 410
 Tare 255
 Common 255
 Hairy 256
 Tares 173
 Tarragon 401
 Tartarian Honeysuckle 365
 Tar-weed 377
 Tassel Tree 278
 Tawny Elm 152
 Taxaceae 34, 436
 Taxus 34
 canadensis 34
 minor 34
 Tea
 Labrador 307
 Mexican 165
 New Jersey 275
 Oswego 338
 Teaberry 218, 311
 White 312
 Tear-thumb
 Arrow-leaved 163
 Halberd-leaved 163
 Teasel 370
 Wild 370
 Teasel Family 370
 Tecoma 359
 radicans 359
 Tephrosia 251
 virginiana 251

Terrell Grass 80
 Tetragonia 173
 expansa 173, 433
 Tetter-wort 196
 Teucrium 332
 canadense 332
 var. *littorale* 332
 littorale 332
 Thale Cress 206
Thalesia
 uniiflora 359
 Thalictrum 188
 clavatum 426
 dioicum 188
 polygamum 188
 purpurascens 188
 revolutum 188
Thaspium
 aureum 427
 barbinode 427
 trifoliatum 427
 Thatch Grass 68
Thelypodium
 pinnatifidum 208
 Thicket Bindweed 163
 Buckwheat 163
 Thimbleberry 237
 Thimbleweed 190, 393
 Thin Grass 64
 Thistle
 Bull 405, 406
 Canada 406
 Common 405
 " Sow 411
 Cotton 407
 Curled 405
 Field 405
 " Sow 411
 Flowering 197
 Pasture 406
 Plumed 405
 Plumeless 405
 Russian 169
 Scotch 407
 Sow 411
 Spiny-leaved Sow 411
 Star 407

Thistle
 Swamp 406
 Tall 406
 Yellow 197, 405
Thlaspi 200
 arvense 200
 Thorn
 Cockspur 225
 Hedge 225
 Newcastle 225
 White 225
 Thorn Apple 347
 Thornless Rose 242
 Thorny Amaranth 170
 Thoroughwort 375, 376
 Thread-and-Needle 121
 Thread-foot 213
 Three-leaved Solomon's Seal 123
 Three-seeded Mercury 265
 Three-square Rush 86
 Three-toothed Cinquefoil 233
 Five-finger 233
 Throw-wort 336
 Thuja 37
 occidentalis 37
 Thyme 341
 Creeping 341
 Wild 341
 Thymelaeaceae 289, 438
 Thyme-leaved Sandwort 175
 Speedwell 354
Thymus 341
 Serpyllum 341
 Tiarella 215
 cordifolia 215
 Tick Trefoil 252
 Tickle Grass 51
 Tickseed 395
 Tickseed Sunflower 397
 Tiger Lily 120
 Tilia 277
 americana 277
 Michauxii 277
 pubescens 277
 vulgaris 277
 Tiliaceae 277, 438, 440
 Tillaea 214

- Tillaea
 aquatica 214
 simplex 214
 Timothy 62
 Tinker's Weed 367
 Tissa
 canadensis 173
 marina 173
 rubra 173
 Toad Grass 114
 Rush 114
 Toad-flax 350
 Bastard 156
 Blue 350
 Tobacco 348
 Indian 374, 389
 Ladies' 388
 Sailor's 401
 Wild 348
 Tomato 344
 Strawberry 346
 Tongue Grass 176, 200
 Toothache Tree 262
 Toothed Medick 250
 Tooth-root 208
 Toothwort 208
 Cut-leaved 209
 Large 209
 Toper's-plant 241
 Touch-me-not
 Pale 274
 Spotted 274
 Touch-me-not Family 274
 Tower Cress 210
 Mustard 210
 Toxylon
 pomiferum 154
 Trachynotia
 junceae 68
 Tradescantia 113
 virginiana 113
 Tragopogon 410
 porrifolius 410
 pratensis 410
 Trailing Arbutus 311
 Traveler's Joy 190
 Treacle Mustard 200, 206
 Tree of Heaven 263
 Trefoil 189, 248
 Bird's-foot 250
 Marsh 320
 Showy Tick 253
 Shrubby 263
 Tick 252
 Trembling Poplar 141
 Triadenum
 virginicum 282
 Trichostema 332
 dichotomum 332
 lineare 332, 423
 Tricuspis
 seslerioides 70
 Tridens 70
 flavus 70
 Trientalis 316
 americana 316
 Trifolium 248
 agrarium 249
 arvense 248
 aureum 249
 hybridum 249
 incarnatum 248, 431
 medium 426
 pratense 248
 procumbens 249
 repens 249
 Triglochin 45
 maritima 45
 palustris 425
 Trillium 124
 cernuum 124
 erectum 124
 erythrocarpum 125
 grandiflorum 124
 undulatum 125
 Trillium
 Large-flowered White 124
 Nodding 124
 Painted 125
 Purple 124
 Red 124
 White 124
 Trinity 113

- Triodia*
cuprea 70
purpurea 70
Triosteum 367
angustifolium 367
aurantiacum 367
perfoliatum 367
Triphora
trianthophora 132
Triplasis 70
purpurea 70
 Triple-awned Grass 60
Tripsacum 48
dactyloides 48
Trisetum 66
palustre 66
pennsylvanicum 66
spicatum 66, 417
subspicatum 66
 var. *molle* 66
Triticum 79
sativum 79, 431
vulgare 79
Trollius 191
laxus 191
 Trout Lily 121
 Trumpet Creeper 359
 Honeysuckle 366
 Weed 375
 Trumpet-flower 359
Tsuga 37
canadensis 37
 Tufted Buttercup 187
 Crowfoot 187
 Loosestrife 316
 Vetch 256
 Tulip Poplar 194
 Tree 194
 Tumble Mustard 205
 Weed 51, 170
 Tupelo 305
 Turkey Corn 198
 Turkey-foot 48
 Turkey-pod 211
 Turk's-cap Lily 120
 Turmeric
 Indian 193
- Turmeric-root 193
 Turnip 202, 204
 Indian 109
 Wild 109
 Turtlehead 352
 Tuscarora Rice 74
 Tussilago 402
 Farfara 402
 Twayblade 136
 Large 136
 Twig Rush 91
 Twin-flower 367
 Twisted-stalk 123
 Twitch Grass 57
 Two-leaved Solomon's Seal 123
 Typha 39
 angustifolia 39
 latifolia 39
 Typhaceae 39, 436
Ulmaria
palustris 234
rubra 234
Ulmaria 235
Ulmus 152
alata 153
americana 152
campestris 152
fulva 152
 Umbelliferae 297, 438, 440
 Umbrellawort 172
 Unicorn-plant 360
 Unicorn-root 118
 False 125
 True 118
Unifolium
canadense 123
 Upland Boneset 376
 Upright Goosefoot 167
 Mignonette 212
Urtica 155
dioica 155
gracilis 155
Lyallii 155
urens 155
 Urticaceae 152, 436, 439
Urticastrum
divaricatum 155

- Utricularia 357
 biflora 358
 clandestina 357
 cornuta 358
 fibrosa 429
 gibba 358
 inflata 357
 intermedia 358
 minor 358
 purpurea 358
 resupinata 358
 striata 429
 vulgaris 358
 var. *americana* 358
 Uva-ursi 311
 Uvularia 118
 perfoliata 118
 sessilifolia 119
 Vaccaria
 Vaccaria 180
 Vaccinium 313
 arboreum 427
 atrococcum 314
 canadense 313
 corymbosum 313
 var. *amoenum* 313
 " *atrococcum* 314
 " *pallidum* 427
 macrocarpon 314
 nigrum 313
 Oxycoccus 314
 var. *intermedium* 314
 pennsylvanicum 313
 var. *angustifolium* 313
 " *nigrum* 313
 stamineum 313
 vacillans 313
 Vagnera
 racemosa 122
 stellata 122
 trifolia 123
 Valerian 370
 American 129
 Garden 370
 Greek 327
 Wild 129
 Valerian Family 370
 Valeriana 370
 edulis 429
 officinalis 370
 Valerianaceae 370, 438, 441
 Valerianella 370
 Locusta 370, 435
 olitoria 370
 radiata 370
 Vallisneria 47
 spiralis 47
 Vanilla Grass 59
 Vegetable Mercury 127
 Velvet Dock 349
 Grass 66
 Leaf 278
 Velvet-leaf Blueberry 313
 Venus' Looking-glass 372, 373
 Veratrum 118
 viride 118
 Verbascum 349
 Blattaria 349
 var. *albiflorum* 349
 phlomoides 349, 434
 Pseudo-Lychnitis 350, 434
 Thapsus 349
 Verbena 330, 331
 angustifolia 331
 Aubletia 331
 bracteosa 331
 canadensis 331, 434
 Drummondi 331
 hastata 331
 var. *pinnatifida* 331
 officinalis 330, 432
 stricta 331
 urticaefolia 331
 Verbenaceae 330, 438, 440
 Vernonia 375
 noveboracensis 375
 Veronica 353, 441
 agrestis 429
 americana 353, 429
 Anagallis 429
 arvensis 354
 Beccabunga 429
 Buxbaumii 355
 byzantina 355

Veronica

- Chamaedrys* 354
- hederaefolia* 355, 434
- longifolia* 353
- officinalis* 354
- peregrina* 354
- scutellata* 354
- serpyllifolia* 354
- Teucrium* 354
- Tournefortii* 355
- virginica* 353

Vervain 330

- Blue 331
- European 330
- Hoary 331
- White 331

Vervain Family 330**Vetch** 255

- Blue 256
- Common 255
- Cow 256
- Crown 252
- Hairy 256
- Slender 256
- Spring 255
- Tufted 256
- Winter 256

Vetchling 257

- Yellow 257

Viburnum 368

- acerifolium* 368
- alnifolium* 368
- americanum* 368
- cassinoides* 369
- dentatum* 368
- lantanoïdes* 368
- Lentago* 369
 - var. *sphaerocarpum* 369
- nudum* 369
- Opulus* 368
 - var. *americanum* 368
- prunifolium* 369
- var. *globosum* 369
- pubescens* 368

Viburnum

- Maple-leaved 368
- Sweet 369

Vicia 255

- angustifolia* 255
 - var. *segetalis* 255
- Cracca* 256
- Faba* 256, 430
- hirsuta* 256, 434
- sativa* 255
- tetrasperma* 256
- villosa* 256

Vinca 321

- minor 321

Vincetoxicum

- nigrum* 323

Vine Family 276**Viola** 284, 441

- affinis* 285
- amoena* 287
- arvensis* 288
- atlantica* 286
- blanda* 287
 - var. *palustriformis* 287
- Brittoniana* 286
- canadensis* 288
- canina* 427
 - var. *Muhlenbergii* 288
 - " *sylvestris* 427
- conspersa* 288, 427
- cucullata* 284
- fimbriatula* 286
- incognita* 287
- labradorica* 288
- lanceolata* 287
- latiuscula* 285
- Muhlenbergii* 288
- nephrophylla* 285
- obliqua* 285
- odorata* 287
- ovata* 286
- pallens* 287
- palmata* 285
 - var. *cucullata* 284, 285
 - " *dilatata* 285
 - " *sororia* 286
- papilionacea* 285
- pectinata* 286
- pedata* 284
 - var. *bicolor* 284

Viola

- var. *lineariloba* 284
 - primulifolia* 287
 - pubescens* 288
 - var. *scabriuscula* 288
 - rostrata* 288
 - rotundifolia* 287
 - sagittata* 286
 - scabriuscula* 288
 - septemloba* 286
 - septentrionalis* 286
 - sororia* 286
 - striata* 427
 - subsagittata* 286
 - tricolor* 288
 - triloba* 285
 - vagula* 285
 - venustula* 285
- Violaceae 284, 438, 440
- Violet 284
- Bird-foot 284
 - Canada 288
 - Damask 206
 - Dame's 206
 - Dog 288
 - Dog's-tooth 121
 - Downy Yellow 288
 - Early Yellow 287
 - English 287
 - Lance-leaved 287
 - Long-spurred 288
 - Marsh Blue 284
 - Primrose-leaved 287
 - Round-leaved 287
 - Smooth Yellow 288
 - Sweet 287
 - " White 287
 - Water 315
 - Woolly Blue 286
- Violet Bloom 345
- Violet Family 284
- Viper's Bugloss 330
- Virginia Creeper 276
- Snakeroot 157
 - Stonecrop 214
- Virgin's Bower 190
- Mountain 190

Virgin's Bower

- Purple 190
- Vitaceae 276, 438
- Vitis 276
- aestivalis* 276
 - bicolor* 277
 - bipinnata* 427
 - cordifolia* 427
 - indivisa* 427
 - labrusca* 276
 - riparia* 277
 - vilpina* 277, 427
- Waahoo 271
- Wahoo Elm 153
- Wake Robin 124
- Waldsteinia 232
- fragarioides* 232
- Walking Fern 21
- Leaf 21
- Wall Cress 206, 210, 211
- Mustard 204
 - Rocket 204
- Wallweed 380
- Walnut 144, 145
- Black 144
 - White 144
- Walnut Family 144
- Washingtonia*
- Claytoni* 298
 - longistylis* 298
- Water Arum 110
- Avens 235
 - Beech 146
 - Carpet 216
 - Celery 186
 - Chinquapin 184
 - Cress 206
 - Crowfoot 184, 185
 - Cup 213
 - Elm 152
 - Foxtail 62
 - Hemlock 299
 - Hemp 171
 - Horehound 341
 - Hyacinth 114
 - Lily 183
 - " Family 183

Water

Lobelia 374
 Marigold 397
 Milfoil 185, 294
 " Family 294
 Mint 342
 Nymph 183
 Oats 58
 Parsnip 300
 Pennywort 297
 Persicaria 161
 Pimpernel 315
 Plantain 47
 " Family 45
 Purslane 291
 Rice 58
 Shamrock 320
 Shield 184
 Smartweed 162
 Star Grass 114
 Starwort 267
 " Family 267
 Target 184
 Violet 315
 Willow 289
 Water-blobs 191
 Waterleaf 184, 327
 Waterleaf Family 327
 Watermelon 371
 Water-weed 47
 Waterwort 282
 Waterwort Family 282
 Wax Myrtle 143
 Pinks 182
 Waxberry 143
 Wax-leaved Meadow Rue 188
 Waxwork 271
 Way Grass 160
 Weeping Elm 152
 Willow 139
 Weld
 Dyer's 212
 Wheat 79
 Cow 356
 Whip-cord Willow 141
 Whip-poor-will's Shoe 129
 Whiskey Cherry 243

White Adder's Mouth 136

Alder 306
 Amaranth 170
 Ash 317
 Avena 235
 Baneberry 193
 Birch 147, 148
 Bird's-eye 176
 Campion 178
 Cedar 37
 Chadlock 202
 Charlock 202
 Clover 249
 Cohosh 193
 Daisy 400
 Ear-drops 198
 Elm 152
 Golden-rod 378
 Goosefoot 166
 Grass 58
 Hearts 198
 Hellebore 118
 Lettuce 413
 Maple 273
 Melilot 249
 Mignonette 212
 Mulberry 154
 Mustard 202
 Oak 149
 Petunia 349
 Pigweed 170
 Pine 34
 Poplar 141
 Puccoon 196
 Robin 178
 Snakeroot 193, 376, 377
 Spruce 36
 Swamp Honeysuckle 307
 Teaberry 312
 Thorn 225
 Trillium 124
 Vervain 331
 Walnut 144
 Water Crowfoot 184
 Willow 138
 White-bark 141
 White-beads 193

White-heart Hickory 145

White-topped Aster 388

White-weed 400

Whitewood 194, 277

Whitlow Grass 199

Whorled Milkweed 323

Mint 343

Pogonia 132

Polygala 264

Wicky 309

Wicopy 289

Wild Allspice 196

Apple 222

Asparagus 125

Azalea 308

Balsam-apple 372

Bean 258

Bergamot 338

Black Currant 218

Blue Lettuce 412

Broom Corn 70

Buckwheat 163

Burnet 241

Calla 110

Carrot 303

Celery 47

Chamomile 399

Cherry 243

Chess 78

Clematis 190

Coffee 367

Columbine 192

Comfrey 328

Cranesbill 261

Cucumber 372

Elder 296

Forget-me-not 329

Garlic 119

Ginger 157

Ginger-root 157

Globeflower 191

Goose Plum 246

Gooseberry 218

Hazelnut 146

Honeysuckle 308, 366

Indigo 247

Ipecac 266

Wild

Isaac 340

Job's Tears 330

Lady's Slipper 129

Leek 119

Lemon 194

Lettuce 411

Lily of the Valley 123

Liquorice 252, 362

Lupine 248

Madder 362

Marjoram 340

Mint 344

Morning Glory 325

Mustard 203

Onion 119

Orange-red Lily 120

Pansy 288

Parsnip 302

Peanut 259

Pear 222

Peppergrass 200

Pink 179

Plum 246

Potato-vine 324

Radish 202

Raisin 369

Rice 58

Rose 243

Rye 80

Sage 376

Sarsaparilla 296

Senna 247

Sensitive Plant 247

Spikenard 122

Spinach 166

Stonecrop 214

Strawberry 231, 232

Sunflower 395

Sweet William 326

Tansy 234

Teasel 370

Thyme 341

Tobacco 348

Turnip 109

Valerian 129

Yam 126

Wild

- Yam-root 126
- Yellow Flax 260
- " Lily 120
- Willoughbya*
- scandens* 377
- Willow 137
- Autumn 138
- Bay-leaved 138
- Beaked 140
- Bitter 141
- Black 137
- Bog 139
- Brittle 138
- Crack 138
- Dwarf Gray 140
- Glaucous 139
- Glossy 138
- Gray 141
- Heart-leaved 139
- Hoary 140
- Laurel-leaved 138
- Lavender 141
- Prairie 140
- Purple 141
- Pussy 139
- Ring 139
- River Bank 139
- Rose 141
- Sage 140
- Sand Bar 139
- Shining 138
- Silky 140
- Water 289
- Weeping 139
- Whip-cord 141
- White 138
- Willow Family 137
- Persicaria 160
- Willow-herb 291
- Great 291
- Wind-flower 189, 190
- Wine Currant 219
- Wineberry 237
- Winged Elm 153
- Pigweed 165
- Winter Cherry 346

Winter

- Chickweed 176
- Cress 207, 208
- Crookneck Squash 372
- Vetch 256
- Winterberry 270
- Smooth 270
- Wintergreen 306, 311
- Aromatic 311
- Chickweed 316
- Flowering 263
- One-flowered 306
- Spotted 306
- Wire Grass 48, 69, 73, 160
- Witch Alder 219
- Elm 153
- Hobble 368
- Witches' Money-bags 214
- Witches' Pouches 201
- Witch-hazel 219
- Witch-hazel Family 219
- Withe-rod 369
- Wolf Grape 345
- Wolffia 112
- columbiana 112, 419
- Wood Anemone 190
- Betony 357
- Buttercup 187
- Chess 77
- Crowfoot 187
- Fern 22
- Fringe 197
- Grass 49
- Lily 120
- Mint 338, 339
- Nettle 155
- Reed Grass 65
- Rush 117
- Sage 332
- Sorrel 260
- " Family 260
- Woodbine 276
- Woodland Agrimony 241
- Woodruff 361
- Woodsia 24
- ilvensis 24
- obtusa 24

- Woodia*
blunt 24
rock 24
rusty 24
Woodwardia 19
expansifolia 19
aristata 19
virginica 19, 416
Woody Groundwort 168
Nightsshade 345
Sampson 168
Wool Grass 88
Woolly Blue Violet 286
Wormseed 195
Wormseed Mustard 206
Wormwood 400, 402
Beach 401
Roman 391, 402
Woundwort 337
Xanthium 391
canadense 392
var. echinatum 392
commune 392
echinatum 392
glabratum 392
pungens 392
spinosum 391
strumarium 392
Xolisma
foliosiflora 310
ligustrina 310
Xyridaceae 112, 436
Xyris 112
caroliniana 112
Congdoni 113
flexuosa 112
montana 419
Smalliana 113
Yam 126
Wild 126
Yam Family 126
Yam-root
Wild 126
Yard Grass 69
Rush 114
Yarrow 398
Common 398
Yellow Adder's Tongue 121
Avena 235
Beldrew 352
Bark 147
Chamomile 399
Cinna 122
Clover 149
Cress 207
Daisy 393
Dock 158
Dog's Tooth Lily 121
Iris 127
Lemon 184
Maize 249
Moccasin Flower 129
Monkey Flower 352
Myrtle 315
Nelumbo 184
Oak 150
Parilla 194
Pimpernel 301
Pine 34
Poplar 194
Puccoon 193
Rattle 357
Rocket 207
Sarsaparilla 194
Strawberry 232, 234
Thistle 197, 405
Vetchling 257
Water Crowfoot 185
Yellow-barked Oak 152
Yellow-eyed Grass 113, 127
Yellow-eyed Grass Family 113
Yellow-flowered Strawberry 232
Yellow-root 191, 193
Yellow-weed 212
Yew 34
American 34
Yew Family 34
Yucca 121
filamentosa 121
Zannichellia 44
palustris 44
Zanthoxylum 262
americanum 262
Zea 48

Zea

Mays 48, 430

Zizania 58*aquatica* 58*palustris* 58**Zizia** 300**Zizia***aurea* 300, 427var. *obtusifolia* 300*cordata* 301**Zostera** 45*marina* 45





State of Connecticut
State Geological and Natural History Survey
BULLETIN No. 15

SECOND REPORT
ON THE
HYMENIALES OF CONNECTICUT

By
EDWARD ALBERT WHITE, B.S.
Professor of Floriculture, Massachusetts Agricultural College

BULLETINS

OF THE

State Geological and Natural History Survey of Connecticut.

1. First Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1903-1904.
2. A Preliminary Report on the Protozoa of the Fresh Waters of Connecticut; by Herbert William Conn.
3. A Preliminary Report on the Hymeniales of Connecticut; by Edward Albert White.
4. The Clays and Clay Industries of Connecticut; by Gerald Francis Loughlin.
5. The Ustilagineæ, or Smuts, of Connecticut; by George Perkins Clinton.
6. Manual of the Geology of Connecticut; by William North Rice and Herbert Ernest Gregory.
7. Preliminary Geological Map of Connecticut; by Herbert Ernest Gregory and Henry Hollister Robinson.
8. Bibliography of Connecticut Geology; by Herbert Ernest Gregory.
9. Second Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1905-1906.
10. A preliminary Report on the Algæ of the Fresh Waters of Connecticut; by Herbert William Conn and Lucia Washburn (Hazen) Webster.
11. The Bryophytes of Connecticut; by Alexander William Evans and George Elwood Nichols.
12. Third Biennial Report of the Commissioners of the State Geological and Natural History Survey, 1907-1908.
13. The Lithology of Connecticut; by Joseph Barrell and Gerald Francis Loughlin. [Ready shortly.]
14. Catalogue of the Flowering Plants and Ferns of Connecticut growing without cultivation; by a Committee of the Connecticut Botanical Society.
15. Second Report on the Hymeniales of Connecticut; by Edward Albert White.

Bulletins 1, 9, and 12 are merely administrative reports, con-

taining no scientific matter. The other bulletins may be classified as follows:

Geology: Bulletins 4, 6, 7, 8, 13.

Botany: Bulletins 3, 5, 10, 11, 14, 15.

Zoölogy: Bulletin 2.

These bulletins are sold and otherwise distributed by the State Librarian. Postage, when bulletins are sent by mail, is as follows: No. 1, \$.01; No. 2, .07; No. 3, .08; No. 4, .06; No. 5, .03; No. 6, .12; No. 7, .06; No. 8, .05; No. 9, .02; No. 10, .08; No. 11, .07; No. 12, .02; No. 14, .15; No. 15, .06; The prices when the bulletins are sold, are as follows (including postage): No. 1, \$.05; No. 2, .35; No. 3, .40; No. 4, .30; No. 5, .15; No. 6, .50; No. 7, .60*; No. 8, .20; No. 9, .05; No. 10, .35; No. 11, .30; No. 12, .05; No. 14, .75; No. 15, .35.

Bulletins 1-5 are bound as Volume I. The price of this volume is \$1.50. Bulletins 6-12 are bound as Volume II. The price of this volume is \$2.45. Other volumes will follow.

It is intended to follow a liberal policy in gratuitously distributing these publications to public libraries, colleges, and scientific institutions, and to scientific men, teachers, and others who require particular bulletins for their work, especially to those who are citizens of Connecticut.

Applications or inquiries should be addressed to

GEORGE S. GODARD,
State Librarian,
Hartford, Conn.

* If map is mounted as a wall map, and sent by express, \$1.60.

CATALOGUE SLIPS.

Connecticut. State geological and natural history survey.

Bulletin no. 15. Second report on the hymeniales of Connecticut. By E. A. White, Hartford, 1910.

70 pp., 28 pls., 23^{cm}.

White, Edward Albert.

Second report on the hymeniales of Connecticut. By Edward Albert White, Hartford. 1910.

70 pp., 28 pls., 23^{cm}.

(Bulletin no. 15, Connecticut geological and natural history survey.)

CATALOGUE SLIPS.

Botany.

White, E. A. Second report on the hymeniales of Connecticut. Hartford, 1910.

70 pp., 28 pls., 23^{cm}.

(Bulletin no. 15, Connecticut geological and natural history survey.)





State of Connecticut
PUBLIC DOCUMENT No. 47

**State Geological and Natural
History Survey**

COMMISSIONERS

FRANK BENTLEY WEEKS, Governor of Connecticut (*Chairman*)
ARTHUR TWINING HADLEY, President of Yale University
WILLIAM ARNOLD SHANKLIN, President of Wesleyan University
FLAVEL SWEETEN LUTHER, President of Trinity College (*Secretary*)
CHARLES LEWIS BEACH, President of Connecticut Agricultural College

SUPERINTENDENT

WILLIAM NORTH RICE

BULLETIN No. 15



HARTFORD

Printed for the State Geological and Natural History Survey

1910



PLATE II. *Amanitopsis vaginata*. (Natural size.)

Cap thin, brown or nearly white, umbonate in center; margins deeply striate; stem 4 to 5 inches high, thicker at base; volva distinct.

8901

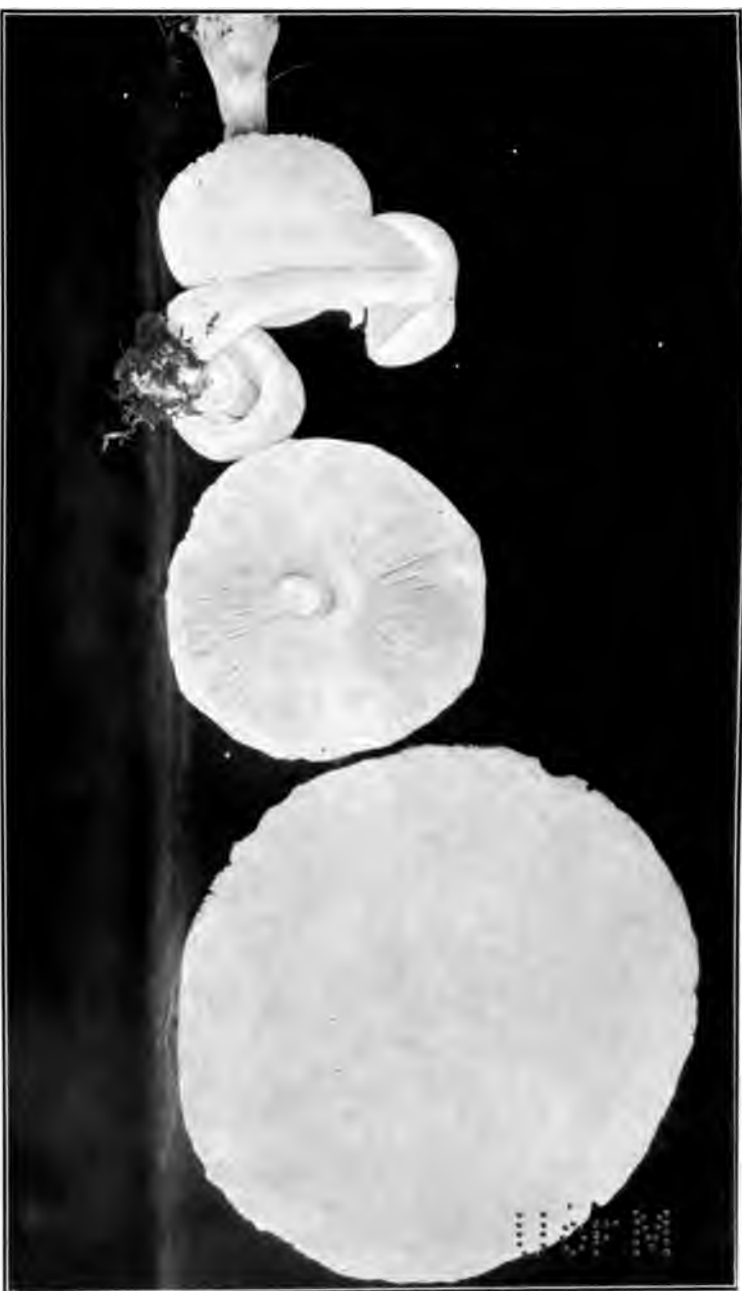


PLATE III. *Lepiota naucnoides*. (Reduced one-third.)
Cap chalk-white, nearly globular before expanding; becoming oblate with age; gills white, stem 1 to 3 inches long, thickened at base, tapering upward.

Mr. U

UoM



PLATE IV. *Marasmius oreades*. Fairy Ring. (Reduced one-fifth.)
 Cap 1 to 1½ inches in diameter, thin, tough, brown, then tan-colored; stem 1½ to 2 inches long,
 equal, solid white, covered with down.

Ver 11

.



PLATE V. *Marasmius rotula*. (Natural size.)
 Cap $\frac{1}{4}$ inch in diameter, membranaceous, umbilicate, plicate, white; stem
 slender, bony in texture, white or partly black.

1701

VerB



PLATE VI. *Marasmius semihirtipes*. (Reduced one-third.)
Cap 1 inch to $1\frac{1}{2}$ inches broad, convex, brown, striate on margins; stem equal, densely hairy at base.

2. Flesh changing to red where bruised; cap covered with red scales.....*L. americana*
Flesh not changing to red..... 3
3. Stem with movable ring.....*L. procera*
Stem with fixed ring..... 4
4. Surface of cap covered with many small, erect, pointed scales, light brown or olive-brown in color...*L. asperula*
Surface of cap not covered with small, erect, pointed scales 5
5. Surface of cap granular; plants red-yellow...*L. granulosa*
Surface of cap not granular..... 6
6. Surface of cap covered with a dense white veil of mealy down.....*L. farinosa*
Surface of cap with distinct, persistent scales..... 7
7. Stem covered with soft, floccose scales..... 8
Stem smooth; surface of cap cracking into numerous reddish scales in a crested manner.....*L. cristata*
8. Spores elliptical*L. clypeolaria*
Spores spindle-shaped.....*L. metulaespora*

MARASMIUS Fr.

- Stems cohering into a somewhat solid mass...*M. cohaerens*
Stems separate and distinct..... 1
1. Plants succulent and fleshy.....*M. oreades*
Plants becoming dry and leathery..... 2
 2. Flesh having odor and taste resembling that of onions*M. scorodoni*
Flesh without distinct odor and taste..... 3
 3. Stem black, shining; cap thin, depressed in center *M. rotula*
Stem not black;..... 4
 4. Stem hairy below, smooth above..... 5
Stem smooth or slightly tomentose..... 6
 5. Stem filled with dark, blood-colored juice.....*M. varicosus*
Stem without colored juice, densely hairy below.....
M. semihirtipes
 6. Gills permanently connected by veins.....*M. retiphyllus*
Gills not connected by veins; stem long and graceful;
cap with striate margins.....*M. elongatipes*

TRICHOLOMA Fr.

- Plants violet-tinted ; stem bulbous ; flesh white *T. personatum*
 Plants not violet-tinted..... 1
1. Cap viscid..... 2
 Cap not viscid..... 5
2. Stem stout, 3 to 6 inches long, 1 inch thick...*T. portentosum*
 Stem slender, 1 to 4 inches long, $\frac{3}{4}$ inch thick..... 3
3. Cap brown or red-brown ; gills becoming spotted with
 red as plants mature.....*T. transmutedans*
 Cap with no shade of red ; gills never spotted with red 4
4. Cap yellow with black streaks.....*T. sejunctum*
 Cap yellow or green-yellow without streaks....*T. equestre*
5. Plants with a strong odor resembling soap ; flesh
 red*T. saponaceum*
 Plants without strong odor..... 6
6. Cap covered with dark red hairs ; flesh yellow...*T. rutilans*
 Cap not red..... 7
7. Taste bitter ; plants pure white.....*T. album*
 Taste not bitter..... 8
8. Plants gray-brown or mouse-colored.....*T. terreum*
 Plants white, tinted with yellow ; center of cap
 darker*T. albo-flavidum*

COLLYBIA Fr.

- Stem terminating in a long, tapering, pointed root *C. radicata*
 Stem not terminating in a single root..... 1
1. Stem densely hairy ; plants growing on stumps *C. velutipes*
 Stem not densely hairy..... 2
2. Gills broad, distant..... 3
 Gills narrow..... 5
3. Plants large and coarse ; cap 3 to 4 inches broad ;
 stem 3 to 4 inches long, $\frac{1}{2}$ inch thick.....*C. platyphylla*
 Plants smaller..... 4
4. Stem seldom over $1\frac{1}{2}$ inches long, $\frac{1}{2}$ inch thick *C. esculenta*
 Stem 2 to 4 inches long.....*C. lacerata*
5. Stems united at base..... 6
 Stems not united at base..... 7
6. Stem downy over its entire surface, long.....*C. confluens*
 Stem downy only at base, short.....*C. acervata*



PLATE VII. *Collybia platyphylla*. (Reduced one-half.)
Cap 3 to 4 inches across ; flesh thin, dark brown when young, becoming grey or dingy white with age ; stem 3 to 4 inches long. $\frac{1}{2}$ inch thick, equal.

WroU





PLATE VIII. *Collybia butyracea*. Butterfly Collybia. (Reduced one-fifth.)

Cap 2 to 3 inches across, thick at center, becoming thin at margins, red-brown in color, becoming white with age, shining, soft to touch as if oiled; stem 2 to 3 inches high, hollow.

4400



FIGURE IX. *Collybia zonata*. (Natural size.)
 Cap $\frac{1}{2}$ inch to $1\frac{1}{4}$ inches wide, dark brown, covered with dense fibrils, **uneven**, forming distinct zones, membranaceous; stem even, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long.

3700



PLATE X. *Mycena haematophoda*. (Natural size)
Cap $\frac{1}{2}$ to 1 $\frac{1}{2}$ inches wide; flesh thin, bell-shaped, striate, red-brown; stems clustered, about 2 inches long, thicker at the base which is covered with a white down. When broken a blood-red juice flows from the stem.

84701



PLATE XI. *Mycena lesiana*. (Reduced one-third.)
Cap $\frac{1}{2}$ inch broad, rich golden yellow, deeply striate; stem 1 to $1\frac{1}{2}$ inches long, equal,
tufted, coated at base with dense hairs.

7. Plants often growing on other fleshy fungi; stem with distinct tuber at base.....*C. tuberosa*
Plants not growing on other fungi; stem without tubers 8
8. Stem grooved, striate with fibers..... 9
Stem not grooved..... 10
9. Stem even or narrowed towards the base; cap white, sometimes spotted with red.....*C. maculata*
Stem narrowed towards the top; cap red-brown, buttery to the touch.....*C. butyracea*
10. Stem covered with fibrillose tomentum; cap umbilicate*C. zonata*
Stem smooth..... 11
11. Stem white.....*C. strictipes*
Stem red or brown.....*C. dryophila*

MYCENA Fr.

- Plants with a colored juice.....*M. haematopoda*
Plants without colored juice..... 1
1. Stem clothed with blue hairs at base; all parts of young plant tinged with blue.....*M. cyanothrix*
Stem not clothed with blue hairs at base..... 2
 2. Gills and cap flesh-colored.....*M. sub-incarnata*
Gills and cap not flesh-colored..... 3
 3. Surface of cap viscid or glutinous..... 4
Surface of cap not viscid..... 5
 4. Cap gray or green-yellow; gills joined squarely to stem*M. epipterygia*
Cap brown or gray with dark lines; gills running down stem.....*M. vulgaris*
 5. Cap yellow, deeply striate.....*M. lesiana*
Cap not deeply striate..... 6
 6. Gills purplish with a darker toothed margin..*M. pelianthina*
Gills gray, turning pink with age, connected by veins*M. galericulata*

'LACTARIUS Fr.

- Plants with watery juice; cap tan-colored, clothed with close tomentum.....*L. aquifluus*
Plants with variously colored, milky juice, this milk sometimes disappearing with age..... 1

1. Milk white at first, usually acrid from the first..... 2
 Milk white at first, mild, or changing from mild to acrid 8
 Milk highly colored from the first..... 21
2. Cap viscid, margin incurved..... 3
 Cap not viscid..... 5
3. Cap dingy, green-gray; surface often zoned with
 darker blotches.....*L. blennius*
 Cap with no tinge of green..... 4
4. Gills yellow or pink; cap tinged with red, surface
 often zoned.....*L. torminosus*
 Gills white; cap yellow or pink, zoneless.....*L. trivialis*
5. Milk white, soon changing to sulphur-yellow *L. chrysorrhoeus*
 Milk permanently white..... 6
6. Stem solid..... 7
 Stem stuffed with fibers; gills squarely joined to the
 stem, very narrow, crowded.....*L. pergamenus*
7. Gills broad, distant; margin of cap or whole surface
 densely clothed with velvety tomentum..... 8
 Gills narrow, decurrent; surface of cap smooth; milk
 very acrid.....*L. piperatus*
8. Whole surface of cap minutely velvety-tomentose; soft
 to the touch, 2 to 5 inches broad.....*L. vellereus*
 Surface of cap smooth, margin inrolled and covered
 with tomentum, 3 to 5 inches broad.....*L. deceptivus*
 Surface of cap smooth, margin inrolled, extreme edge
 minutely silky, 1 to 2 inches broad.....*L. involutus*
9. Flesh having a strong, pleasant odor, especially when
 dry*L. camphoratus*
 Flesh odorless, or with a slight fragrance..... 10
10. Cap viscid..... 11
 Cap not viscid..... 15
11. Milk changing to sulphur-yellow.....*L. theiogalus*
 Milk permanently white..... 12
12. Gills white, soon changing to brick-red or salmon..... 13
 Gills not changing to red..... 14
13. Cap cinnamon-colored; milk sweet.....*L. quietus*
 Cap ashy or buff-gray; milk becoming somewhat
 acrid*L. fuliginosus*



PLATE XII. *Lactarius torminosus*. (Reduced one-third.)
Cap 3 to 4 inches across, viscid when moist, pale flesh-colored tinged with yellow; stem 1 to 3 inches long, solid; milkwhite, unchanging, acrid.

Model





PLATE XIII. *Lactarius vellereus*. (Reduced one-half.)
Cap white, 3 to 6 inches across; flesh thick, rigid, tapering towards margins, which are inrolled when young; margins densely tomentose; stem 2 to 3 inches long, firm; milkwhite, scanty.

Mr. U





PLATE XIV. *Lactarius involutus*. (Reduced one-third.)

Cap white, 2 to 3 inches broad; flesh thick, equal nearly to margins, which are deeply involuted when young, expanding somewhat with age; stem $\frac{1}{2}$ to 1 inch long, equal, solid; milkwhite, very peppery.

WroU

14. Cap 3 to 6 inches broad, flesh-colored or clay-colored *L. pallidus*
 Cap 1½ to 2½ inches broad, smoky brown..... *L. fumosus*
15. Cap downy..... 16
 Cap smooth..... 19
16. Cap gray; gills white, tinged with yellow; milk slightly acid..... *L. griseus*
 Cap not gray..... 17
17. Gills white, changing to salmon where wounded *L. lignyotus*
 Gills not changing to salmon where wounded..... 18
18. Cap 3 to 5 inches broad, dark red-brown..... *L. corrugis*
 Cap 2 to 3 inches broad, buff-colored..... *L. luteolus*
19. Gills narrow, close, white, tinged with red..... 20
 Gills distant, white or cream-colored; stem ½ to 1 inch long, solid..... *L. hygrophoroides*
20. Cap ½ to 2 inches broad; milk scanty..... *L. subdulcis*
 Cap 2 to 5 inches broad; milk copious..... *L. volemus*
21. Stem spotted in a pitted manner; milk yellow, changing to brick-red..... *L. deliciosus*
 Stem not spotted..... 22
22. Milk saffron-yellow..... *L. chelidonium*
 Milk not yellow..... 23
23. Milk dark red; cap the same color..... *L. subpurpureus*
 Milk dark blue; cap indigo-blue..... *L. indigo*

RUSSULA Pers.

- Plants with a strong fetid odor..... 1
 Plants without fetid odor..... 2
1. Cap 3 to 5 inches broad; gills exuding watery drops *R. foetens*
 Cap 1 to 3 inches broad; gills not exuding watery drops *R. pectinata*
2. Gills forked..... 3
 Gills not distinctly forked..... 7
3. Cap green or yellow-green; taste tardily acid; gills white 4
 Cap red or rust-colored..... 5
4. Stem solid, firm; gills frequently forked..... *R. furcata*
 Stem spongy; gills once or twice forked... *R. aeruginescens*

5. Cap somewhat depressed or funnel-shaped, blood-red;
gills crowded, narrow, somewhat decurrent... *R. sanguinea*
Cap convex, then plane, not blood-red; gills crowded,
broad, not decurrent..... 6
6. Taste slowly acrid; cap flesh-colored, becoming dingy-
white *R. rosacea*
Taste not acrid; cap pale red or rust-colored... *R. depallens*
7. Margin of cap at first bent inward..... 8
Margin of cap not at first bent inward..... 10
8. Flesh changing to red when broken; cap becoming
black *R. nigricans*
Flesh white, not changing color on exposure to air.... 9
9. Stem very short, white..... *R. brevipes*
Stem longer, gray-black..... *R. adusta*
10. Cap without viscid cuticle, absolutely dry, margin not
grooved 11
Cap with viscid cuticle, especially in rainy weather,
margin grooved or covered with wart-like swellings 16
11. Cap bright yellow..... *R. flavida*
Cap not yellow..... 12
12. Cap green or pallid with no tinge of red; gills
white *R. virescens*
Cap not green, tinged with red, pink, or purple..... 13
13. Cap white or tinged with pink at margin..... *R. albella*
Cap not white..... 14
14. Taste very acrid; flesh white, somewhat red under
cuticle *R. rubra*
Taste mild..... 15
15. Cap blood-red; stem 3 inches long, 1 inch thick.... *R. lepida*
Cap dingy purple, turning olive-colored; gills yellow
R. olivacea
16. Gills white..... 17
Gills yellow..... 19
17. Taste mild; cap clear yellow..... *R. citrina*
Taste acrid 18
18. Cap 1 to 1½ inches broad..... *R. fragilis*
Cap 3 to 4 inches broad..... *R. emetica*
19. Cap dark purple..... *R. atropurpurea*
Cap red or yellow..... 20



PLATE XV. *Russula sanguinea*. (Reduced one-third.)
 Cap 2 to 4 inches wide, blood-red, becoming pale at margin, convex, then depressed; flesh thick, white;
 gills decurrent; stem stout; taste acrid.

U. of M.

Wol



PLATE XVI. *Russula viridescens*. Green Russula. (Reduced one-fourth.)
Cap 3 to 5 inches wide, globose at first, depressed with age; flesh thick, white; surface dry, green or dingy white; stem solid,
white; taste mild.

W70U

UoM



PLATE XVII. *Russula decolorans*. (Reduced one-fourth)
Cap 3 to 4 inches wide, thick, orange red at first, becoming yellow with age, viscid when moist; stem 1 to 3 inches long, cylindrical, white; gills with yellow tinge; taste mild.

20. Edge of gills lemon-yellow..... 21
 Edge of gills not lemon-yellow..... 22
21. Cap lemon-yellow or orange.....*R. aurata*
 Cap bright blood-red.....*R. alutacea*
22. Cap 1 to 2 inches broad..... 23
 Cap 3 to 5 inches broad..... 24
23. Stem tapering upwards, stuffed or sometimes hollow
R. roseipes
 Stem equal, solid.....*R. Mariae*
24. Stem short, 1 to 3 inches long, thick and club-shaped
R. integra
 Stem elongated, 3 to 5 inches long, cylindrical *R. decolorans*

PLEUROTUS Fr.

- Veil appendiculate around margin of young cap; cap
 variegated with dingy brown, spot-like scales.. *P. dryinus*
 No evidence of remnants of veil on margin of young cap 1
1. Gills extending down the stem (decurrent)..... 2
 Gills not decurrent..... 5
2. Stem very short or absent..... 3
 Stem distinct..... 4
3. Cap 1 to 3 inches broad, viscid when young, variously
 tinged with dark yellow-green, or red.....*P. scrotinus*
 Cap 3 to 5 inches broad, not viscid when young, yellow-
 white, becoming darker with age.....*P. ostreatus*
4. Spores in mass tinged with lilac; stem 1 to 2 inches
 long*P. sapidus*
 Spores in mass pure white; stem 1/2 inch long or
 shorter, channeled.....*P. petaloides*
5. Stem 2 to 3 inches long, solid.....*P. ulmarius*
 Stem often absent; when present, stuffed, becoming
 hollow*P. lignatilis*

HYGROPHORUS Fr.

- Cap distinctly viscid..... 1
 Cap viscid only when moist..... 4
 Cap not viscid when moist..... 9
1. Cap white, then deep red; gills white, spotted with
 red*H. erubescens*
 Cap not tinged with red..... 2

2. Cap, gills, and flesh, yellow.....*H. nitidus*
Cap white or dark gray..... 3
3. Cap white, covered with light yellow floccose scales at
involute margin.....*H. chrysodon*
Cap dark gray, without scales on even margin *H. calophyllus*
4. Cap red, or tinged with red..... 5
Cap not red..... 8
5. Cap 2 to 4 inches broad, blood-scarlet; flesh of same
color*H. puniceus*
Cap less than 2 inches broad..... 6
6. Cap distinctly conical.....*H. conicus*
Cap convex, becoming plane..... 7
7. Gills connected by veins; cap bright scarlet, becoming
pale with age.....*H. coccineus*
Gills not connected by veins; cap red or red-yellow...
H. miniatus
8. Gills distinctly decurrent.....*H. ceraceus*
Gills decurrent only by a tooth.....*H. chlorophanus*
9. Cap shining white.....*H. virgineus*
Cap not white..... 10
10. Cap gray.....*H. caprinus*
Cap yellow or buff.....*H. pratensis*

CANTHARELLUS Adanson.

- Cap and stem tubular..... 1
Cap and stem solid..... 3
1. Cap thin, funnel-shaped; stem smooth..*C. infundibuliformis*
Cap fleshy 2
2. Surface of cap densely covered with floccose scales; cap
yellow, elongated, funnel-shaped or trumpet-shaped
C. floccosus
Surface of cap smooth, tan-colored.....*C. brevipes*
3. Plants red 4
Plants yellow or gray..... 5
4. Surface and flesh of plants deep blood-red..*C. cinnabarinus*
Surface of cap pink; flesh white.....*C. rosellus*
5. Cap dark gray; flesh thin; gills white.....*C. dichotomus*
Cap yellow or orange..... 6



PLATE XVIII. *Hygrophorus miniatus*. (Natural size.)

Cap $\frac{1}{2}$ to 1 inch wide, convex, then umbilicate, crimson, becoming pale yellow ;
stem $1\frac{1}{2}$ to 2 inches long, equal, crimson or yellow ; gills yellow, thick, distant.

W70U





PLATE XIX. *Cantharellus floccosus*. (Reduced one-fifth)

Cap vase-form, $1\frac{1}{2}$ to 3 inches across, bright yellow at first with numerous darker floccose scales, becoming dull yellow-brown with age; flesh firm; stem short, solid; gills thick, blunt, forking.

8700

6. Gills narrow, close; cap dull orange; margin curved downward *C. aurantiacus*
 Gills distant 7
7. Flesh fragrant; cap smooth, egg-yellow, margin elevated *C. cibarius*
 Flesh odorless; cap covered with brown scales. . *C. lutescens*

OMPHALIA Fr.

- Plants bright golden-yellow, scattered on coniferous logs or twigs..... *O. scabriuscula*
 Plants red-yellow..... 1
1. Plants usually growing in dense clusters on coniferous stumps, logs, or twigs; stem 1 inch long, 1 line thick
O. campanella
 Plants solitary or in small clusters; stem 1 to 2 inches long, ½ line thick..... *O. campanella*, var. *sparsa*

CLITOCYBE Fr.

- Cap funnel-shaped..... 1
 Cap not funnel-shaped..... 2
1. Cap pale red..... *C. infundibuliformis*
 Cap pure white..... *C. adirondackensis*
2. Plants fragrant; cap tinged with green..... *C. odora*
 Plants not fragrant..... 3
3. Plants bright, rich yellow; fleshy..... *C. illudens*
 Plants not bright yellow..... 4
4. Cap white, tinged with brown or gray; stem distinctly thickened near the base..... *C. clavipes*
 Cap violet or purple-tinted..... 5
5. Gills distinctly decurrent..... 6
 Gills attached squarely to the stem, or decurrent only by a tooth..... 7
6. Cap dark purple; stem purple, streaked with white fibrils, equal, densely clothed with white hairs at base *C. amethystina*
 Cap pale yellow, with tints of purple; stem swollen in the middle..... *C. ochro-purpurea*
7. Stem bulbous, thickly clothed with white tomentum...
C. trullissata
 Stem not bulbous, slender, smooth..... *C. laccata*

LENZITES.

- Plants growing on wood of deciduous trees..... 1
- Plants growing on wood of coniferous trees....*L. sepiparia*
- 1. Cap obsoletely zoned; substance corky-coriaceous, rigid
L. betulina
- Cap distinctly zoned; substance leathery, easily bent..
L. flaccida

LENTINUS Fr.*

- Cap with central stem..... 1
- Cap shelving..... 4
- 1. Cap smooth.....*L. cochleatus*
- Cap not smooth..... 2
- 2. Cap densely hairy, leathery.....*L. Lecomtei*
- Cap variegated with darker squamules or scales, fleshy 3
- 3. Cap white, with black, hairy squamules.....*L. tigrinus*
- Cap red-yellow, with darker, spot-like scales....*L. lepideus*
- 4. Caps closely overlapping and joined at the base, sur-
face coarsely hairy.....*L. vulpinus*
- Caps less closely overlapping, often distinct, surface
velvety, sponge-like.....*L. ursinus*

PANUS Fr.

- Cap shelving; stem very short or absent..... 1
- Cap not shelving; stem seldom in center..... 3
- 1. Taste becoming hot and astringent.....*P. stipticus*
- Taste mild..... 2
- 2. Gills light gray; cap cinnamon-colored, covered with
gray-white tomentum.....*P. farinaceus*
- Gills rust-color; cap gray.....*P. salicinus*
- 3. Cap smooth, red-brown, becoming violet; stem 1 inch
long*P. torulosus*
- Cap with tufts of hairs over surface, red-yellow; stem
very short or absent.....*P. rudis*

*The specimens of *Lentinus chrysopeplus* reported in Bulletin No. 3 have since been compared with Berkley and Curtis's type specimens in the Cryptogamic Herbarium of Harvard University, and are evidently very different. The specimens previously reported were evidently Dr. Peck's *Omphalia scabriuscula*. In regard to this species, Dr. Peck writes as follows: "I received from you this morning the specimens of a small yellow mushroom. I have compared them with our specimens of *Omphalia scabriuscula*, and I find no essential difference. Yours are a little smaller. I think them the same species."



PLATE XX. *Lentinus wrysinus*. (Reduced one-fourth.)
Cap shelving, 2 to 4 inches broad, dark brown on older portion, becoming yellow-brown at margin; surface
spongy with a dense tomentum.

8700

UoM



PLATE XXI. *Cortinarius corrugatus*. (Reduced one-third.)

Cap 2 to 5 inches wide, deeply ridged or corrugated, nearly smooth at center, umbonate, dark brown in color; stem 3 or 4 inches long, stuffed.

PAXILLUS Fr.

- Plants orange-yellow *P. aurantiacus*
 Plants not orange-yellow 1
 1. Margin of cap strongly inrolled (involute) *P. involutus*
 Margin of cap straight or slightly inrolled 2
 2. Cap 2 to 4 inches broad, rust-color; gills adnate
 P. atro-tomentosus
 Cap 1 to 2 inches broad, dingy yellow; gills decur-
 rent at base *P. panuoides*

CORTINARIUS Fr.

- Plants small; cap 1 to 1½ inches broad *C. vernalis*
 Plants larger, seldom less than 2 inches broad 1
 1. Plants some shade of red or yellow 2
 Plants tinged with violet 9
 2. Cap viscid 3
 Cap not viscid 5
 3. Cap coarsely corrugated *C. corrugatus*
 Cap not corrugated 4
 4. Stem with a turbinate bulb at base, stuffed, then
 hollow *C. turbinatus*
 Stem not bulbous, solid, scaly *C. collinitus*
 5. Stem and cap scaly 6
 Stem and cap not scaly 7
 6. Cap fleshy throughout; gills crowded; stem stuffed,
 then hollow *C. bolaris*
 Cap thin at the margin; gills distant; stem solid
 C. armillatus
 7. Stem with a more or less persistent ring *C. flavifolius*
 Stem with no ring 8
 8. Cap cinnamon-colored; stem yellow; gills at first
 yellow *C. cinnamomeus*
 Cap scarlet or blood-red; gills of a similar color
 C. cinnabarinus
 9. Cap viscid, sometimes spotted with white *C. iodes*
 Cap not viscid 10
 10. Stem bulbous, then elongated and equal; color of cap
 changing from violet to brick-red *C. torvus*
 Stem constantly bulbous 11

11. Bulb depressed-emarginate.....*C. obliquus*
 Base of stem club-shaped.....*C. violaceus*

PHOLIOTA Fr.

- Plants growing in soil..... 1
 Plants growing on wood..... 2
1. Cap 1 to 2 inches broad.....*P. praecox*
 Cap 3 to 5 inches broad, even in the center, wrinkled
 in pits at the sides.....*P. caperata*
2. Cap less than 2 inches broad; surface torn into minute
 scales, dry; flesh thin.....*P. curvipes*
 Cap more than 2 inches broad; flesh thick..... 3
3. Cap viscid..... 4
 Cap not viscid, yellow-red, with darker, revolute scales
P. squarrosa
4. Cap and stem densely covered with thick, dark brown
 scales*P. squarrosoides*
 Cap and stem less densely covered with thin, red-
 yellow scales.....*P. adiposa*

INOCYBE Fr.

- Cap floccose, scaly; stem scaly.....*I. lanuginosa*
 Cap covered with silky fibers..... 1
1. Stem smooth; cap longitudinally cracked when ex-
 panded*I. rimosa*
 Stem covered with hairy fibers; cap never cracking..
I. floccosa

FLAMMULA Fr.

- Plants large; cap more than 4 inches broad, dry, buff-
 color*F. magna*
- Plants small 1
1. Cap viscid..... 2
 Cap not viscid..... 3
2. Stem solid, yellow; cap yellow.....*F. polychroa*
 Stem hollow or stuffed; cap brick-red.....*F. fusus*
3. Cap covered with silky threads near margin....*F. alnicola*
 Cap smooth..... 4
4. Cap pale yellow.....*F. flavida*
 Cap cinnamon or tawny-orange.....*F. hybrida*



PLATE XXII. *Cortinarius violaceus*. (Reduced one-third)
Cap 2 to 4 inches wide, dark violet in color ; stem 2 to 4 inches long, equal except
bulbous base, violet colored ; flesh similar in color.

8700



PLATE XXIII. *Pholiota caperata*. (Natural size.)

Cap 2 to 5 inches broad, convex, yellow-brown, often roughened on surface with ridges or pits.

8700

UoM



PLATE XXIV. *Pluteus granularis*. (Reduced one-third)
Cap 2 to 5 inches wide, convex, then expanded, dark brown, with surface broken
into numerous small patches, surface also somewhat ridged or wrinkled.

UoM



PLATE XXV. *Pluteus cervinus*.

Cap 2 to 5 inches wide, campanulate, then expanded, gray, yellow-brown, or fawn-colored; plants solitary or tufted.

UoM



PLATE XXVI. *Pluteus tomentosulus*. (Natural size.)

Cap 1 to 1 1/2 inches wide, campanulate, becoming flat with age; surface covered with a dense white tomentum.

GALERA Fr.

Plants growing in moss; gills connected by veins....

G. hypnorum

Plants not in moss; gills unconnected.....*G. tenera*

PLUTEUS Fr.

Surface of cap in young plants covered with silky fibrils 1

Surface of cap in young plants smooth or slightly wrinkled*P. admirabilis*

1. Plants large; cap 4 to 6 inches in diameter, fleshy..... 2

Plants small 3

2. Cap covered with a dense, dark brown tomentum in center, broken into granules near margin; gills white, then flesh-color.....*P. granularis*

Cap fibrillose, becoming smooth at disk; gills white, then flesh-color.....*P. cervinus*

Cap fibrillose, becoming wrinkled at disk; gills dark brown, fringed or toothed on the margins....*P. umbrosus*

3. Surface of cap wrinkled and darker at disk; stem white, tinged with blue or green, fibrillose....*P. salicinus*

Surface of cap not wrinkled..... 4

4. Stem smooth.....*P. longistriatus*

Stem covered with silky fibrils.....*P. tomentosulus*

ENTOLOMA Fr.

Stem solid..... 1

Stem hollow 2

1. Cap large, 4 to 6 inches broad; flesh white.....*E. grande*

Cap small, 1 to 2 inches broad; flesh pink....*E. Grayanum*

2. Cap with a distinct, central elevation (umbonate) *E. strictius*

Cap not umbonate.....*E. rhodopolium*

CLITOPILUS Fr.

Gills decurrent 1

Gills squarely joined to the stem, or slightly decurrent 5

1. Gills somewhat forked; taste very bitter..*C. noveboracensis*

Gills not forked; taste mild..... 2

2. Cap covered with a gray powder or bloom....*C. prunulus*

Cap not covered with powder..... 3

3. Cap somewhat viscid when moist, often irregular;
stem short.....*C. orcella*
Cap not viscid..... 4
4. Cap 1 to 2 inches broad; gills dark gray; stem stuffed
C. popinalis
Cap 2 to 4 inches broad; gills white or pale gray;
stem solid.....*C. abortivus*
5. Cap glabrous..... 6
Cap silky, umbilicate, somewhat zoned.....*C. micropus*
6. Cap 1 inch broad; stem with a close white tomentum
at base.....*C. unitinctus*
Cap 1 to 3 inches broad, slightly fibrillose; often
growing in greenhouses.....*C. tardus*

AGARICUS Linn.

- Stem terminating in an abrupt bulb.....*A. abruptus*
Stem not distinctly bulbous..... 1
1. Cap thin..... 2
Cap fleshy 3
 2. Cap yellow-white, fibrillose-silky.....*A. comptulus*
Cap white, brown in center, covered with minute brown
scales*A. placomyces*
 3. Gills narrow, rounded behind.....*A. Rodmani*
Gills broad 4
 4. Gills at first white; ring on stem large and thick *A. arvensis*
Gills at first pink; ring more or less torn, often dis-
appearing*A. campestris*

Varieties of *Agaricus campestris*

- Cap covered with red scales.....var. *pratricula*
Cap not covered with red scales..... 1
1. Cap brown or yellow-brown, covered with minute hairs
var. *hortensis*
Cap and stem brown, scaly.....var. *villaticus*

STROPHARIA Fr.

- Cap hemispherical at maturity; stem glabrous *S. semiglobata*
Cap at first hemispherical, expanding at maturity; stem
downy below the ring.....*S. stercoraria*

WFO



PLATE XXVII. *Hypholoma appendiculatum*. (Natural size.)

Cap 1 to 3 inches wide, dingy white with shades of yellow, fleshy when young, becoming leathery with age ; margin of young cap fringed with remnants of the veil.

2021

HYPHOLOMA Fr.

- Surface of cap marked by strong wrinkles which radiate
from the center..... 1
- Surface of cap smooth..... 2
1. Cap brown; stem brittle, slightly mealy at the top...
H. hymenocephalum
Cap gray, tinged with yellow; stem fleshy, smooth....
H. rugocephalum
2. Flesh fragile; remnant of veil often left on margin
of cap..... 3
Flesh tough; margin of cap without remnants of veil 4
3. Cap brown, often shaded to ochre at margin; gills
somewhat forked, umber-colored.....*H. subaquilum*
Cap gray-brown; gills not forked, white, then brown
H. appendiculatum
4. Stem solid; flesh white.....*H. sublateralitium*
Stem hollow; flesh yellow.....*H. fasciculare*

COPRINUS Pers.

- Cuticle of cap separating into shaggy, concentric scales;
stem with a well developed ring.....*C. comatus*
- Cuticle not breaking into shaggy scales..... 1
1. Cap 2 to 4 inches broad, smooth, or covered with a few
obscure scales; ring imperfect.....*C. atramentarius*
Cap less than 2 inches broad; ring absent..... 2
2. Cap covered with minute glistening scales.....*C. micaceus*
Cap smooth, very fragile.....*C. plicatilis*

PANAEOLUS Fr.

- Stem solid; cap white.....*P. solidipes*
- Stem hollow..... 1
1. Surface of cap ridged.....*P. retirugis*
Surface of cap smooth.....*P. campanulatus*

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

2. The second part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

AMANITA Pers.

As noted in the preliminary report, this genus includes the most violently poisonous species to be found among the fleshy fungi. Therefore these species should be most carefully avoided by the amateur collector. Never should "button" forms be collected for eating, and by all means avoid white specimens. However, the following species of *Amanita* are classed as edible.

***Amanita Caesarea* Scop.** Kingly *Amanita*. This is one of the most striking forms of the genus. It is found abundantly in open woods in Mansfield during July, and occasional specimens occur during the autumn months. Its large size, brilliant coloring, striate or lined margins, with the absence of warts or scales on the surface of the cap, serve as characteristics which distinguish it from its poisonous relatives. The characters of the species are so distinct that, when once positively identified, *A. Caesarea* is not likely to be confused with non-edible kinds. Unless positively identified, it might be possible to mistake this edible *Amanita* for two of its relatives, *A. Frostiana* and *A. muscaria*. The plants of the edible species, when small, resemble the former; while, in color, the edible species resembles the latter; but the floccose or compact scaly cap of *A. muscaria* should prevent confusing the two.

A. Caesarea has a distinct white volva or cup at the base of the stem. This is quite persistent, and is usually found on mature specimens. The stem and usually the gills are distinctly yellow. In the immature specimens, the gills are covered by a delicate yellow veil which falls around the stem as the cap expands. The stem is somewhat floccose or downy below the ring. The gills are not attached to the stem, and vary in color from white to deep lemon-yellow, the yellow shades appearing in the typical specimens. The flesh is white, with yellow or yellow-red tints as it approaches the outside.

***Amanita rubescens* Fr.** (Plate I) is not liable to be confused with any poisonous species. Its characters are quite

distinct. The volva, or cup, is very fragile, and usually disappears as the plants approach maturity. The color of the whole plant is a dull red-brown, often changing with age to a fawn-color, thus very different from the brilliant red tints of *A. Caesarea*. When bruised or broken the flesh is quickly discolored and changed to red. The cap is quite large, ranging from three to five inches in diameter, and before maturity is covered by dense white scales, the remains of the universal veil. During rainy weather and frequently at maturity these scales disappear, leaving the surface smooth. The stem is often four or five inches long and frequently an inch thick, somewhat enlarged at the base, and surrounded at the top by the large white membranous ring, the remains of the partial veil. The gills are white or whitish, quickly discolored in handling, and are free from the stem. The species occurs in large numbers during the summer and autumn months.

***Amanita strobiliformis* Vitt.** This species has never been collected by the writer, but is listed by Mr. C. C. Hanmer in his collection at East Hartford. The chief characters of the plant are a thick stem, enlarged at the base into a long, solid, scaly bulb resembling a beet; the cap appearing small at first, but gradually enlarging as maturity is reached. The flesh is white, with a strong odor of chloride of lime. This has been pronounced edible by Peck, McIlvaine, and Curtis.

AMANITOPSIS Roz.

In the genus *Amanitopsis* there are no species reported poisonous, but there is danger of mistaking some species of *Amanita* for *Amanitopsis*. *Amanitopsis* has the volva or cup at the base of the stem, but lacks the ring which is always present in *Amanita*, although in some species of *Amanita* it is so fragile that it quickly disappears, the plants at maturity therefore resembling *Amanitopsis*. The chief point for caution lies in determining whether or not a ring has been present on the stem before pronouncing any specimen an *Amanitopsis*. But one species is found in sufficient quantities to make the plants of much value for food.

***Amanitopsis vaginata* (Fr.) Roz.** (Plate II) is one of the most frequent species, and is abundant in open woods from June

until October. Occasionally it is found in open fields and pastures. It is easily identified when once its characteristics are known. The cap varies in color from gray to brown; is from two to four inches in diameter; smooth and shining in the center, with an occasional fragment of the universal veil remaining on the surface. Near the margin the flesh becomes thin, and is marked by deep furrows with prominent ridges. The stem varies in length from three to six inches, and is from one-half to three-fourths of an inch thick. It tapers slightly towards the top, and is hollow, or stuffed with a pithy substance. The volva at the base of the stem is very characteristic; being moderately firm, it persists until the maturity of the cap, as a closely sheathing cup, split down one side. This volva separates easily from the stem; and, unless care is taken in gathering, the stem may be pulled out, leaving the volva in the soil. Great precaution must be observed that no remnants of a ring are present on the upper portion of the stem. The surface of the stem is usually covered by fine scales, but these may be so minute that the stem has a peculiar mealy appearance.

LEPIOTA Fr.

In this group are found some of the best edible species. They are not likely to be confused with *Amanita*, if precaution is taken to ascertain that there are no indications of a cup at the base of the stem. While there are many species in this genus, all of which are considered edible, but three occur in sufficient quantities to merit consideration.

Lepiota procera Scop. Parasol Mushroom. (Plate III, Bull. 3.) This is one of the best-known of the edible species, and has characteristics which serve to easily distinguish it. It is commonly found in pastures during the summer and autumn months, and often occurs on lawns, in thin woods, especially chestnut sprout-lands, and frequently in gardens. It has a bell-shaped cap, more or less elevated in the center, of a gray-brown color. In age the surface of this cap becomes more or less torn into shaggy scales, with the exception of the central elevation, which remains smooth and dark brown until maturity. The brittle stem, which may be from five to twelve inches high, is clothed with numerous small scales, terminating below with a

distinct bulb; at its upper end is a stout, narrow ring, which usually moves freely up and down the stem.

This is the most frequent Connecticut species of *Lepiota*, and is usually found growing singly, or sometimes in troops.

Lepiota americana Pk. is another species which has striking characters. During August it has been abundant, growing in immense clusters on the campus at the Connecticut Agricultural College. It is found around old stumps or in soil. The caps vary in width from one to three inches, and when immature are covered with a thin skin of red-brown color. At maturity this becomes torn into numerous scales except on the more or less prominent center, and the whole plant assumes a dark red-brown color. This red color is noticeable throughout the flesh, and grows darker as the plant nears maturity, or when bruised. This is one of the chief distinguishing characteristics. The stem is shorter and thicker than in *L. procera*; and the bulbous base, so distinct in the latter species, is frequently represented in *L. americana* only by a gradual swelling. Sometimes, however, the bulbous base is well defined. The ring on the stem is less permanent than in *L. procera*, the so-called "parasol mushroom," and frequently disappears as the plant reaches maturity. It is also less distinctly movable.

Lepiota naucinoides Pk. (Plate III). Some American mycologists have doubted whether *L. naucina* Fr. and *L. naucinoides* Pk. are specifically distinct; but without discussing the question the writer will adhere to the name given in Bulletin No. 3. No harm can possibly result to the epicure, since both species are edible. This fungus is frequently very abundant in old fields, about trees which have been heavily mulched, and on open lawns. The writer has found it so abundant that a half-bushel basket could be easily gathered at one time. The plants were unusually large, many of the caps measuring eight to ten inches in diameter. In some respects the plants resemble *Agaricus campestris*, the "pasture mushroom"; but the chalky white appearance of the cap and the absence of the brown gills on mature specimens serve as distinguishing characteristics. The amateur must use much caution in collecting, not to confuse the species with white forms of *Amanita*. After the plant is once determined, the danger is very slight. The cap is nearly globular

1

before expanding, becoming more or less flattened with age, and is usually white and smooth. The gills are at first white, later becoming dingy with the accumulation of spores. The stem is from one to three inches long, and has a thickened base which gradually tapers upward. It is covered with minute fibers when young, but becomes smooth at maturity.

This plant is considered equal to *Agaricus campestris* in point of edibility, and some predict that its cultivation will be equally feasible. The writer has enjoyed several meals, and has found the species a delicious one.

ARMILLARIA Fr.

But one known edible species occurs in this genus, but this has a wide distribution, and has characteristics which make it well known.

***Armillaria mellea* Vahl.** Honey-colored Mushroom. (Plate IV, Bull. No. 3.) Grows about the bases of trees, either attached directly to the stump or growing in soil. Upon close examination the mycelial strands at the base of the stem are found to be closely interwoven; and these become closely connected with the root system of the trees in the vicinity. The plants usually occur in large clusters, the individual plants of which are closely joined. The plant varies much in size, and its chief characters are its honey color, its oval to convex cap, usually covered with sharp, erect, brown scales, which may, however, entirely disappear in moist weather, and its tough, elastic stem, which is uniform in thickness throughout, and more or less covered with floccose scales. The ring, which is usually quite thick, is joined to the stem near its apex. This varies much as regards thickness, often becoming very thin or entirely disappearing with age. This plant is of considerable economic importance, since it frequently attacks fruit trees, especially those whose physiological vigor is already weakened, and serious results follow.

Armillaria mellea is far from being one of the most desirable species for food, because of its tough, leathery consistency; however, when young, it is fairly tender.

MARASMIUS Fr.

This genus contains few desirable edible species, because of the tough and leathery nature of the plants. One species, however, is soft and succulent.

Marasmius oreades Fr. Fairy-ring Mushroom. (Plate IV.) Occurs frequently in lawns. The mycelium, or vegetative part of the fungus, seems to be perennial in the soil; and, as fast as the nutritive substances in the soil become absorbed, it dies. All the while, however, new mycelial strands are sent into fresh territory, so that after a while the fruiting bodies, or caps, appear in well-defined circles. Thus the name "Fairy Ring" is given to this and to several other fungi having similar habits of growth. The plant is commonly found during the summer months, and even after heavy frosts in autumn it has been found abundantly on the campus of the Connecticut Agricultural College. The cap is usually convex, then expanded, having a more or less well-defined elevation at the summit. It varies from one to two and a half inches in diameter. The flesh is thick, but inclined to be tough and leathery. This character, however, usually disappears somewhat with cooking, and the flavor is delicious. The stem is from one to one and a half inches long, and is everywhere clothed with a downy, hairy covering.

TRICHOLOMA Fr.

While this genus contains many species, few are listed as edible. Of the Connecticut species there are six thus considered, and of these *T. personatum* and *T. sejunctum* are the most desirable. The group is characterized by having no distinct ring or cup, but the immature plants are covered with a cobwebby veil, which soon disappears and may leave a slight ring on the stem. The gills are perhaps the most characteristic feature of these plants, being more or less strongly notched as they join the stem. Sometimes this notch is inconspicuous, and disappears entirely by the splitting of the gills with age; but as a rule it is quite prominent.

Tricholoma personatum Fr. Masked Tricholoma. (Plate V, Bull. No. 3.) This is considered one of the best edible species. It grows in open woods, under trees, on lawns, and in open fields. The writer has found this species most frequently

under sugar maple trees which stand along the borders of open fields. It is distinctly an autumnal species, seldom appearing before September. The plants are most frequently found singly, they sometimes occur in groups, but are rarely clustered. They are quite regular in shape, the cap being somewhat globular, with an inrolled margin when young, becoming flattened with age. The surface of the cap is very smooth, and is never mucilaginous or viscid, even in moist weather. The whole plant is fleshy, and dingy white or violet-colored throughout. The cap varies from two to five inches in diameter. The stem is short and thick with a somewhat bulbous base. It is solid when young, becoming filled with a pithy substance when mature. The gills are compact and rounded or notched at their junction with the stem. This species is in high repute as an edible species. Peck says, "My experience leads me to place it among first-class mushrooms." While *T. personatum* resembles some few other species, it cannot be mistaken for poisonous ones, and may be eaten without fear.

Tricholoma sejunctum Sow. This plant is abundant in the chestnut woodlands of the town of Mansfield, and is frequently reported from other parts of the state. Like *T. personatum*, it is a fall species, being most abundant in September and October. Like other members of this genus, the plants are brilliantly colored; in this species shades of yellow predominate. The cap is yellow or green-yellow in color, and more or less streaked with black threads over its surface. When young the plants are distinctly viscid, and at maturity still retain this character if the weather is moist. The cap is similar in size to that of *T. personatum*, but often more irregular in shape. The stem varies from one to three inches in length and from one-half to three-fourths of an inch in thickness. It is usually white, solid within, and frequently it is quite irregular in shape. The gills differ from those of the last species by being broad, distant, distinctly notched at the stem, and easily separating from it. The flesh is white and very tender.

COLLYBIA Fr.

The genus *Collybia* furnishes a large number of edible species. They occur abundantly throughout the season, some

species appearing in early spring, others in late autumn. As far as now known, the genus contains no harmful species. A few, however, become tough and leathery at maturity, and therefore have no food value.

Collybia platyphylla Fr. (Plate VII.) Of the Connecticut species reported, this is probably the most common edible one. The cap is white or gray-brown at maturity, the center often darker than the margin. In shape it is convex when young, becoming expanded, and frequently has an uprolled margin at maturity. The stem is short and thick in comparison with the diameter of the cap. The gills are broad and distant, often becoming torn or broken with age. The flesh is white, thick, and firm, but very liable to become quickly water-soaked in moist weather. It is also very frequently infested with the larvæ of insects. It is a large, coarse plant, resembling *Pluteus cervinus*, from which it may be distinguished by its distant gills. Also belonging, as it does, to the rosy-spored group, the gills of *P. cervinus* soon assume a dull brown color due to the accumulation of spores, while the gills of *Collybia platyphylla* remain white. It occurs on logs which are nearly decayed, and about the bases of decaying stumps. The writer has found the species in Mansfield as early as May 15th, and commonly throughout the summer, until the latter part of September.

Collybia radicata Relh. (Plate VI, Bull. No. 3) is an edible species not likely to be mistaken, if when collecting special notice is taken of the character of the stem. This is long, and thickened near the surface of the soil, tapering above as it approaches the cap, and also tapering below into a long root-like strand. This latter peculiarity gives the plant its specific name. The fungus is commonly found growing in deep leaf-mold, and is abundant throughout the season. The cap is thin, from two to four inches in diameter, convex to nearly plane, and is frequently elevated in the center. It is white or fawn-colored. The flesh is white and thin. The gills are white, thick, and distant, sometimes joined to the stem by a distinct notch similar to that noticed in the description of *Tricholoma*, but frequently the gills extend down the stem by a decurrent tooth.

Collybia velutipes Curt. This plant is of economic importance, not only because of its food value, but because of its

habitat. It occurs as a frequent parasite on living trees. The mycelium gains entrance to the tree through some wound, and makes a rapid growth within the host tissue, absorbing the nutritive substances. The fungus will grow on all wood tissues, tree trunks, decaying stumps, and soil filled with decaying wood tissue. Large clusters were found in Mansfield, growing in soil where a portable saw-mill had once been. The cap varies from light to dark brown, and in size is also variable. The plant grows in dense clusters, and the caps are often crowded and distorted because of this habit of dense growth. They vary from one-half inch to two inches in diameter. Their surface is usually very moist and viscid. As in *C. radicata*, the stem is the characteristic feature of the species. It is from one to three or four inches long and about one-fourth of an inch thick. When the habitat of the plant is a stump, this stem is usually curved. Its most striking character, however, is its dense covering of brown velvety hairs. The plant is occasionally found throughout the season, but is more abundant during the fall months.

Collybia esculenta Wulf. Described by Cooke as the best edible *Collybia*. It has never been collected by the writer. Mr. C. C. Hanmer of East Hartford reports the species. The plant is described by McIlvaine as—"small in size, cap one-half inch or more broad, ochraceous-clay, often becoming dusky, slightly fleshy, convex, then plane, orbicular, obtuse, smooth, even, or when old slightly striate. Flesh tough, white, savory. Stem one inch and more long, scarcely one-twelfth of an inch thick, or thread-like, and wholly equal, obsoletely tubed, tough, stiff and straight, even, smooth, slightly shining, clay-yellow, with a long perpendicular, commonly smooth, tail-like root. Gills adnexed, even decurrent, with a very thin, small tooth, then separating, very broad, limber, somewhat distant, whitish, sometimes clay-colored."

MYCENA Fr.

Like *Marasmius*, this genus contains few edible species. The small size of most of the species makes their use for food impracticable.

Mycena galericulata Scop., however, usually occurs in large numbers clustered on logs and stumps in woodlands. This is considered a desirable edible species. The cap is more or less

conical, often bell-shaped, and varies in color through the grays and browns. In size the cap is seldom over an inch in diameter. The gills are thin, with connecting veins, and are joined to the stem by a small decurrent tooth. This species is most abundant during the fall.

LACTARIUS Fr.

The writer has enjoyed more meals of the species of this genus than of any other in the group of fleshy fungi. In August, 1906, the author was to speak on "Mushrooms" at the Prospect House, Mt. Holyoke, Mass. On his arrival it was learned that the papers in near-by cities had announced that mushrooms gathered under his supervision would be served in the dining room of the hotel from August 9th to August 13th. The prospect of gathering mushrooms in sufficient quantities for from thirty to forty-five guests was almost appalling. This genus and *Cantharellus* came to the writer's aid, and furnished delicious edible fungi in sufficient quantities to meet all demands. As its name signifies, the genus is characterized by an abundance of milky juice in the tissue of the plants.

Lactarius volemus Fr. (Plate X, Bull. No. 3.) There is seldom a week in the summer months when this species is not abundant in the woods in the vicinity of Mansfield. It is seldom found in the deeper, thicker woodland, but delights in open chestnut sprout-land which has a southern exposure. The caps have an orange-brown color, quite characteristic of the species; and, when once learned, the plant is seldom mistaken. The surface of the cap is smooth, or slightly wrinkled in the center. The cap is quite symmetrical in shape, with a somewhat inrolled margin when young, becoming plane with age. Frequently the center becomes depressed, giving the cap a cup-like appearance. The flesh is white and firm, and filled with an abundance of white milk. This immediately darkens when exposed to the air, and becomes thick and stringy. In the older specimens this abundance of milk is frequently lacking. The gills are white, often tinted with the russet color of the cap, and these are quickly discolored when handled. They are usually squarely attached to the stem, but sometimes have decurrent lines running down the stem. The stem varies from one to four inches in length and from one-half

to three-fourths of an inch in thickness. It is firm and solid at first, becoming somewhat pithy at maturity. It is usually of a uniform thickness, but may taper somewhat towards the base. It is colored like the cap, although frequently it is a lighter shade of brown. This is considered by the writer the most delicious species belonging to the genus.

Lactarius corrugis Pk. is not distinct in many characters from *L. volemus*. Somewhat larger in size, the cap is of a darker shade of brown; the surface is usually more deeply corrugated, and the young specimens are covered with a close pubescence which gives the cap a velvety appearance in the sunlight. This plant has similar habitats to *L. volemus*, and the two plants have been found within a few feet of each other.

Lactarius piperatus (Scop.) Fr., Peppery Lactarius (Plate IX, Bull. No. 3), is another exceedingly common species. It grows in open woods in similar places to the other *Lactarii*. Its pure white color serves to make it a conspicuous object in the leaf-mold. Sometimes the cap does not appear above the surface, especially if the leaf-mold is thick, and the presence of the fungus is recognized only by an elevation of the leaves. The species is characterized by its pure white color, its thick fleshy cap, which becomes more and more funnel-shaped as it expands, its thick stem, and very close, narrow gills. This last feature serves to separate the species from *Lactarius deceptivus*, which it resembles. *L. deceptivus* has more distant, coarse gills. The gills in *L. piperatus* are more or less forked or divided into pairs. The milk is exceedingly acrid in young specimens. It is white and unchangeable when exposed to the air. This species is frequently gathered and eaten by the students of the Connecticut Agricultural College for their "steak and mushroom spreads." It loses its peppery character in cooking.

Lactarius deceptivus Pk. (Plate VIII, Bull. No. 3) is closely related to *L. piperatus*, from which it may be distinguished by a dense, wool-like growth of hairs along the inrolled margin of the cap, and by its coarse, distant gills. The cap varies from three to six inches in diameter, and in some cases the writer has seen specimens even eight inches across. It grows in similar localities with *L. piperatus*. The flesh is white and coarse in texture; milk white, unchangeable, with an acrid taste. The

plant is even more abundant than *L. piperatus*. It frequently becomes discolored with yellow stains, thus lacking the pure white color of *L. piperatus*.

Lactarius deliciosus (L.) Fr. is considered the most desirable of the edible species of *Lactarii*, but the writer has seldom found it in large quantities. In the vicinity of Mansfield it is usually found growing singly or in small, scattered patches. Its botanical characters are very striking. The cap varies from two to four inches in diameter; before maturity it is depressed in the center, and usually becomes deeply funnel-shaped with age. The color varies through red and yellow shades, frequently assuming a gray tint. The surface of the cap is smooth, slightly viscid, and more or less distinctly zoned. The margin of the cap is usually inrolled. The stem is quite short, from one to two inches in length; and striking features of the species are spots or pits of the same color as the cap which appear on the outside of the stem. The flesh of *L. deliciosus* is gray-white when freshly broken, becoming quickly stained with green, due to discoloration of the tissue caused by chemical changes in the milk. This milk is saffron-yellow when the flesh is first broken, but immediately changes in color.

RUSSULA Pers.

Members of this genus are viewed with suspicion by many people, while by others they are considered edible. One instance has come to the writer's attention where extreme nausea followed a meal of plants supposed to be *Russula alutacea*. It is probable that the species may have been confused with *R. emetica*, which often causes attacks of this kind. The genus contains some of the most brilliantly colored species to be found in the whole group of fleshy fungi. These colors vary much in shades of red, green, and yellow.

Russula alutacea Fr. The chief characteristics of this species are its mild taste and its yellow gills. This fungus is abundant in woodland during the summer and early fall. The cap varies from one and one-half to three inches in diameter, and is of a bright or a deep red color inclining to shades of purple. The surface is smooth in the center, but becomes ridged and uneven near the margin. It is covered with a somewhat viscid outer skin. The flesh is very white, and has the peculiar mealiness

characteristic of the genus. The gills are thick and broad and are usually connected by veins. In color they are frequently sulphur-yellow. They never lack the yellow tints.

Russula virescens (Schæff.) Fr. (Plate XVI.) This is considered the best edible species of the genus, and it is quite distinct from all the other species. The cap sometimes is bright green, but more frequently this bright color is quickly lost and the tint changes to a dingy gray. The cap is fleshy and nearly globular when young, expanding until nearly plane at maturity. The surface is smooth at first, but later becomes broken up into wart-like patches. The margin is blunt, even, and smooth, becoming torn and split with age. The flesh is white, and is mild in taste. The stem is short, smooth, white, and at first solid, but soon becomes spongy within. The whole plant is especially likely to be infested with the larvæ of insects. This whole genus seems especially liable to these insect attacks. The flavor of the uncooked flesh of *R. virescens* is considered preferable to all other species, and its crisp, mealy character recommends its use for salads.

PLEUROTUS Fr.

Most of the members of this genus are found growing on wood. As a rule, the reproductive bodies of these wood-dwelling fungi are slowly developed, and the tissue of which they are composed becomes somewhat tough and leathery. The genus contains one species, however, which is considered a great delicacy by the epicure.

Pleurotus ostreatus Jacq. (Plate XII, Bull. No. 3), if gathered before the caps are too old, is very tender and succulent. This so-called "Oyster Mushroom" receives its name, not from any flavor which resembles an oyster, but from its peculiar shape. The plant is not uncommon during the late summer and early fall on a variety of trees — elms, hickories, but more especially on dead and decaying maples. This species is especially common on street trees. The plants grow in characteristic masses, so closely joined that many of the caps become abnormally developed because of this crowded manner of growth. The individual plant is attached to the tree trunk by a very short stem, which is more or less hairy at the base. This stem is attached at one side of the cap. The cap is convex at maturity, with a smooth, moist, white

surface. This white color changes to a yellow brown. The flesh is white and firm. The gills are broad, running down the stem (decurrent), branching more or less at the base.

Pleurotus ulmarius Bull., the Elm Pleurotus, is also edible, but it is more tough and leathery than *P. ostreatus*.

HYGROPHORUS Fr.

This genus contains several edible species, and, so far as known, none have harmful properties. As the generic name signifies, the surface of the cap is always moist when young. The soft, somewhat waxy texture of the flesh of the cap and gills gives these plants distinguishing characteristics. Most of the species are small and somewhat fragile.

Hygrophorus pratensis (Pers.) Fr., the Pasture Hygrophorus, is one of the most common species. Although usually small, the flesh is thick and compact, furnishing considerable substance. The plants vary considerably in color, some being nearly white, others changing to shades of yellow and buff. When young, the cap is nearly hemispherical, but this expands to a convex form, varying considerably in shape. The gills are thick and coarse, extending down the stem (decurrent), their bases being connected by cross veins. The stem resembles the cap in color, but is usually of a lighter hue. It is thick, and as a rule tapers downward. The species is common throughout the summer in old fields, pastures, or thin woods.

Hygrophorus miniatus Fr. (Plate XVIII.) Passing through some wooded swamp or along some woodland stream, our attention may be called to a brilliant red fungus tinged with yellow, which is growing abundantly among the sphagnum moss. The writer has seen hundreds of plants growing within a small area. These are the Vermilion Hygrophorus. The cap is thin and fragile, distinctly convex when young, expanding somewhat at maturity. The surface may be smooth, but sometimes it is ridged and uneven. The gills are usually yellow, but frequently have the same reddish tints noticeable in the cap. They are not as coarse as in *H. pratensis*, and are usually attached squarely to the stem. The stem is slender and smooth, usually solid, but sometimes it becomes hollow in older specimens. It is colored like the cap.

CANTHARELLUS Adanson.

This genus contains many edible species, and is perhaps the best-known by the amateur collector. The striking colors of the plants and their blunt, branching gills make them especially conspicuous. All writers agree that they form a most desirable article of diet. The writer has observed that during comparatively dry weather the flavor is much better than during a rainy season, as there seems to be a tendency in *C. cibarius* and *C. aurantiacus* to become water-soaked and tasteless. Like many other edible species, these are also quite liable to become infested with larvæ, and need careful examination before preparation for the table. While the number of species is not large, the plants grow abundantly in rich leaf-mold in open woods.

Cantharellus cibarius Fr. (Plate XIV, Bull. No. 3.) This is considered one of the most desirable of the edible species. The cap is of a delicate yellow color, fleshy, with a thick, blunt margin, at first inrolled, then expanding at maturity, and later becoming somewhat uprolled, giving the center of the cap a sunken or vase-shaped appearance. The cap varies in diameter from two to three inches. The stem is rather short, is somewhat unequal, and frequently occurs at one side of the cap. The flesh is white, firm and solid. The gills are thick, distant, and more or less branched. They extend down the stem, and are colored like the cap. The plants may occur singly but are usually abundant within a limited range. The odor is suggestive of apricots, although in some specimens this is not noticeable.

Cantharellus aurantiacus Fr. This is similar in color to *C. cibarius*, but is very different in shape. The cap is fleshy, nearly plane when mature, and not depressed in the center like *C. cibarius*. The margin is somewhat inrolled even at maturity. The cap frequently attains a diameter of four or five inches. The gills are narrow, close, and repeatedly branched, and are colored like the cap or may be lighter. The stem has a similar color, tapers downward, and is from two to three inches in length. The flesh is firm, white, tinted with yellow. The writer has enjoyed several meals of this orange chanterelle, and has experienced no ill effects, although by some writers it is viewed with suspicion.

CLITOCYBE Fr.

From early spring until late fall some members of this genus may be found growing in leaf-mold or on fallen logs in the forests. The plants vary much in color and size. The colors range from pure white through the various shades of purple and violet, and a few are yellow. Many species have a depression in the center of the cap which gives them a more or less funnel-formed appearance. The stem is composed of rather stout fibers, so that it is not easily broken when the plants are pulled from the ground; and these fibers, extending into the cap, closely connect the two, so that the stem and cap are not easily separable as in *Lepiota*.

Clitocybe odora Bull. (Plate XVII, Bull. No. 3.) As the specific name signifies, this species is characterized by a strong odor which is not unlike the fragrance of water-lilies. It occurs abundantly throughout the season. The plants are small, the cap rarely being over two inches in diameter. It is pale green in color, with a thick, tough flesh. The gills are broad and close, similar to the cap in color. The stem is slender, shorter than the diameter of the cap, and dingy white in color.

Clitocybe laccata Scop. This is an exceedingly common species, occurring from early spring until late fall. The characteristics of the species are so striking that it is not likely to be mistaken for any non-edible species. The plant is very variable, however, in its characters, and Dr. Peck has described several varieties. The cap is thin, convex, the margin often becoming uprolled and torn at maturity, giving the plant an abnormal appearance. The surface of the cap is smooth, but sometimes it is densely covered with fine fibers. The color of the cap is usually lighter than that of the gills, the latter being often deeply tinged with purple or lavender. In moist weather the whole plant becomes more or less water-soaked. The gills frequently extend down the stem in the immature plant, but as the cap expands they are torn away from the stem and also become more or less torn otherwise. They frequently have a distinct tooth where they join the stem, and in this respect the plant resembles *Tricholoma*. The stem varies in height from one to four inches, is slender, and yellow-white in color.

CORTINARIUS Fr.

This genus is a member of the ochre-spored group, which group is easily distinguished by the red-yellow color of the gills, due to the accumulation of great masses of spores. Therefore the gills of *Cortinarius* are tinged with red or yellow, and this color deepens at maturity. In one or two species the gills are deeply blood-red in color. The chief distinguishing character of *Cortinarius* is a spider-web veil which surrounds the immature plant. As the cap expands, this veil is ruptured, leaving a more or less well-defined ring on the stem. This veil disappears at maturity, and young specimens are essential in the determination of species. Many of the plants are beautifully colored, *Cortinarius iodes* B. & C. being of an especially attractive dark violet color, curiously spotted with white. When immature the plant is very viscid, giving it a polished appearance. The number of species is large, and for the most part the species are most abundant in the autumn. During the last spring, however, *Cortinarius vernalis* was found abundantly in a grassy woodland road. Several of the most common species are considered edible.

***Cortinarius violaceus* (L.) Fr.** (Plate XXII.) This fungus grows abundantly in the woods, and in color resembles *Tricholoma personatum*, but *C. violaceus* is usually a darker shade of violet, and has the gills rounded as they join the stem. The bulbous base of the stem also suggests *T. personatum*. The cap is convex when young, becoming nearly plane, is usually dry, and covered with fine tufts of hairs. The gills are distant and rather thick, and are colored like the cap, but become tinged with yellow-red as the spores accumulate. The stem is from three to five inches long and one-half inch or more in thickness, with a distinct bulbous base. The flesh is thick and solid, and inclined to be tough at maturity. This is considered one of the best edible species in the genus.

***Cortinarius cinnamomeus* (L.) Fr.** (Plate XX, Bull. No. 3.) This occurs abundantly during September, and is another exceedingly attractive species; it is, however, very different in color from *C. violaceus*. *C. cinnamomeus* is characterized by shades of brown and red, the gills becoming deep blood-red at maturity. The cap varies from one to two and one-half inches in diameter. It is somewhat bell-shaped, with a distinct knot or

umbo in the center. The cap becomes expanded with age, until it is somewhat flattened. It is covered with a dense coat of fine fibrils. The flesh is thin, and of a similar color to the surface of the cap. The somewhat crowded gills are joined squarely to the stem. They are yellow at first, but are dark red at maturity. The stem is from two to four inches long, and about one-half inch in diameter, equal throughout, and is hollow, and colored like the cap.

Other species listed as edible are *C. collinitus* (Pers.) Fr., a plant yellow-brown in color, abundantly smeared over with a glutinous substance, especially in moist weather; and *C. armillatus* Fr., characterized by a distinct ring on the stem; both of which were found frequently in Mansfield during the season of 1906.

PHOLIOTA Fr.

The plants of this genus are similar to *Cortinarius* in the color of the spores. They also have the veil, but, unlike the spider-web veil of *Cortinarius*, this is thick and persistent. In the character of the ring they are similar to *Armillaria*, of the white-spored group. They are, however, quite distinct in other characters. Many of the *Pholiotas* grow on the trunks of trees. Frequently fungi having this habitat possess a peculiar bitter flavor. The *Pholiotas* are no exception to the rule, and, while some wood-growing species are delicious, others are too bitter to be eaten.

Pholiota praecox Pers. is one of the first edible mushrooms of the spring months. The writer has found it abundantly growing on lawns during the month of May. It continues abundant throughout the season. The cap is convex, white or cream-colored, becoming yellow with age. During wet weather the surface of the cap is slightly sticky, but when dry this character quickly disappears. The margin of the cap is at first inrolled and connected with the stem by a rather thick veil. This ruptures as the cap expands. The cap is seldom over two inches in diameter. The stem is long and slender, stuffed when young, but becomes hollow with age. The crowded gills are squarely attached to the stem, sometimes slightly extending down it (decurrent). They are white at first, then become yellow. The plants are small and delicate but usually occur abundantly.

Pholiota caperata Pers. (Plate XXIII.) Another species of this genus which is found growing on the ground is *P. caperata*. During the season of 1906 it was especially abundant in Mansfield, growing in open chestnut woodland. The cap is large, often five inches in diameter. It is yellow in color, and often roughened on the surface with ridges and pits. The flesh is thick and firm. The gills are thin, crowded, and somewhat saw-toothed on the margins.

Pholiota squarrosoides Pk. (Plate XXI, Bull. No. 3.) This is one of the most delicious of the edible fleshy fungi. It grows in large clusters on dead stumps, especially those of maple trees. The caps are convex, quite viscid when moist, and covered with dense scales scattered over the surface. As the caps mature, these scales separate somewhat, thus showing the white surface of the cap beneath. This gives the cap its peculiarly mottled appearance. The gills are close and compact, white at first, becoming cinnamon-colored with age. The stem is somewhat stout and densely covered with thick, white scales. These change, as the plants mature, to a dull yellow-brown color.

PLUTEUS Fr.

This genus belongs to the rosy-spored group, therefore the gills of fresh specimens soon assume a pink color, due to the accumulation of these spores. These plants are usually found growing on decaying tree trunks or other woody substances.

Pluteus cervinus Schaeff. (Plate XXV; Plate XXIII, Bull. No. 3.) This species is one of the most common members of the genus, and is one of the few edible species in the rosy-spored group. It is usually found in the woods growing singly, from early spring until late frost, but nowhere has the writer found it so abundant as along a wood road which has been heavily coated with sawdust. There was hardly a day throughout the entire season when a good supply of fresh plants could not be gathered; and mushrooms from this source not only supplied several of the families living on the campus of the Connecticut Agricultural College, but also furnished material for many "mushroom spreads" prepared by the students. One mushroom enthusiast took a large quantity of the sawdust and stored it in his cellar, that he might have a supply of fresh mushrooms throughout the winter.

Those which grow where there is an abundance of plant food are in large clusters; a single cluster frequently filling a four-quart measure. The cap is bell-shaped, becoming expanded with age, until it is nearly flat. Frequently the edges roll up at maturity, and when in clusters the cap becomes misshapen because of the density of growth. The color of the cap varies considerably. Frequently it is gray-brown or fawn-color, but often of a dark brown. The surface of the cap may be smooth or densely covered with fine fibrils. The whole plant resembles closely *Collybia platyphylla*, but lacks its general coarseness. The gills especially distinguish the two species. *Pluteus cervinus* has the gills close yet not crowded, broad, and free from the stem; these are at first white, then flesh-colored. The stem is symmetrical or slightly tapering upward; it is firm, solid, and either quite smooth or covered with fine fibrils similar to those of the cap. The color of the stem also varies with the color of the cap. The interior of the stem is filled with fine fibers which differ in substance from the flesh of the cap, therefore the two are easily separable.

CLITOPILUS Fr.

This genus resembles in many of its characteristics *Clitocybe* of the white-spored group. Most of the species are earth-growing; and, so far as now known, none of the species are harmful. Care must be taken, however, to distinguish the species from *Entoloma* of this same rosy-spored group. In *Entoloma* the gills have a distinct tooth where they join the stem (sinuate), while in *Clitopilus* the gills are joined squarely to the stem or extend down it in decurrent lines.

Clitopilus orcella Bull. The best edible species in this genus is *C. orcella*. It is also one of the most abundant fungi, growing commonly in open woods and grassy pastures throughout the summer months. The cap is often irregular in shape, is very fleshy, soft, plane or slightly depressed. It is white or yellow-white in color, slightly sticky or viscid when moist, becoming silky when dry. The flesh is solid, thick, white, and has a strong farinaceous odor and taste. The gills are close, decurrent, running down the stem, at first white, then flesh-colored. The stem is short, thick, solid, colored like the cap, somewhat thickened above, and is often at one side of the center (eccentric).

AGARICUS Linn.

Probably no genus is better known than *Agaricus*, because of its commercial importance. Fortunately the so-called "field mushroom" is not easily mistaken for other species, because of its striking characters.

Agaricus campestris Linn. (Plate XXIV, Bull. No. 3.) This species is frequently found in open fields and pastures during August and September. The writer has found that in pastures the plants can rarely be gathered, as they seem to be much sought for by the cattle.

Agaricus campestris has many varieties, but these are not strongly distinct, so that they are not usually distinguished by the amateur collector. This is the species which is much cultivated. Quite frequently it is found in greenhouses, growing in carnation beds or in lettuce beds, sending up abundant crops of "buttons" from time to time. The cap is at first hemispherical or convex, then expanding until at maturity it becomes nearly or quite plane. The margin is incurved, and joined to the stem by a partial veil, which on rupturing leaves a more or less well-developed ring on the stem. This ring is near the middle of the stem, and frequently disappears entirely as the plant matures. On other specimens it may be quite persistent. The surface of the cap is usually covered with fine, white, hair-like scales, and these with the outer layer of fungus threads separate easily from the flesh, so that the cap may be readily peeled. Frequently it is said that this is the criterion of an edible mushroom, but the test cannot be depended upon in all species. In color the cap is silvery white. The gills are close, and at first are a delicate pink, but this color soon changes as the plants mature until they assume a deep brown color. The stem is nearly equal throughout its length, but is sometimes thickened near the base; it varies in length from one and one-half to three inches, but is usually quite short. Within, it is stuffed with many fibers.

The following varieties are described in McIlvaine's "One Thousand American Fungi":

Var. *albus* Berk.—"A very common wild form."

Var. *griseus* Pk.—"Cap grayish, silky, shining."

Var. *pratensis* Vitt.—"Meadow variety. Cap with reddish scales."

Var. *umbrinus* Vitt.—“Dark brown, stem short, minutely scaly.”

Var. *rufescens* Berk.—“Cap reddish, minutely scaly. Flesh turning bright red when bruised or cut.”

Var. *villaticus* Brond.—“Cap scaly; stem scaly.”

Var. *hortensis* Cke.—“Cap brownish or yellow-brown. Cultivated.”

Var. *Buchanni* —“Cap depressed in center.”

Var. *elongatus* —“Long-stemmed variety.”

Var. *vaporarius* Vitt.—“Greenhouse variety.”

McIlvaine also says: “The *Agaricus campestris* is known the world over as the common mushroom. It is cosmopolitan, appearing in pastures and rich places, from spring and until long after severe frosts. It is the sweet morsel of gourmets. Indirectly it has done more damage than the viciousness of all other toadstools. It is by mistaking the young button forms of the deadly *Amanita* for the button forms of the common mushroom, that most cases of fatal mushroom poisoning are brought about. It is, also, usually the persons who think they know the mushroom and cannot be deceived, that get poisoned. If two rules are observed, danger can be avoided. (1) Never eat a fungus gathered in the woods believing it to be the mushroom. The typical *A. campestris* does not grow in the woods; species of *Agaricus* somewhat resembling it do. (2) Look at the gills; those of the mushroom are at first a light pink, which rapidly, as the plant matures, darkens to a dark brown, purplish-brown, or purplish-black. This is due to the ripening of the spores. Those of *Amanita* are constantly white.”

HYPHOLOMA Fr.

This genus contains many edible species. The spores are similar in color to those of *Agaricus*, but the plants are easily distinguished. In rupturing, the universal veil does not leave a well-defined ring on the stem as it does in *Agaricus*, but the remnants of the veil remain attached to the margin of the cap, in many instances forming an appendiculate margin. In some instances young specimens show the ring quite distinctly, but all indications of it soon disappear.

In *Agaricus*, the cap easily separates from the stem, the substance of the flesh being different in texture, but in *Hypholoma*

the substance is the same throughout, therefore the stem and cap do not easily separate. The plants are more commonly found in the fall, but some species occur during the summer months.

Hypholoma appendiculatum Bull. (Plate XXVII.) This is a common species, and grows in great abundance on the lawns of the Connecticut Agricultural College during July and August. The mycelium seems to be perennial, for the plants have appeared in the same spots several years. It is one of the best edible kinds; the caps are very tender and are excellent in flavor. These plants grow in thick clusters on the ground or on decaying logs, and often cover a considerable area. The cap varies from one to three inches in diameter, and also varies in color from dingy white through various shades of brown and yellow. It is fleshy and membranous, becoming thin and leathery when dry. The cap is ovate at first, then expands with age. The margin of the young cap is fringed with the remains of the veil, but this disappears as the plants reach maturity. The stem is from two to three inches long and from one-twelfth to one-sixth of an inch thick. It is delicate, shredding into fibers when broken. The crowded gills are joined squarely to the stem, are at first white, then pink, and lastly dingy brown. The plant is a safe one to gather for food, for there is nothing with which it is likely to be confused.

Hypholoma sublateritium Schaeff. Brick-topped *Hypholoma*. (Plate XXV, Bull. No. 3.) This species is more frequent during the fall months than in summer. During the autumn of 1906 the writer found an immense number even after severe frosts. The plants are commonly found on decaying stumps, and always grow on decaying wood. During the last year the writer found an immense number of the plants apparently growing on the ground. Suspecting, from the peculiar radiating manner in which they grew, that they were attached to a tree stump, he found by careful examination that a stump had been dug out and the plants were growing from the larger roots which remained in the ground. The caps vary from two to four inches in diameter, and are of a yellow-red color, darker in the center and with pale margins. Frequently the plants are so densely clustered that the caps are abnormally developed. The plants are quite fleshy; the flesh being white

at first, becoming yellow with age. The stem varies in length, but is usually about three inches long. When growing from the side of stumps, it becomes variously curved. The gills are squarely jointed to the stem, and are more or less crowded. At first they are a green-yellow in color, but become dingy brown at maturity. The veil is often present on the young plants. These plants have long been considered edible, and the writer has eaten them frequently. However, when he was in Dr. Peck's laboratory a year ago, Dr. Peck called his attention to a letter he had just received, stating that two ladies had been taken ill after eating plants like the specimens sent. These plants were without doubt *Hypholoma sublateritium*, and from the symptoms it was suspected that the illness was caused by indigestion which followed a hearty meal of this fungus.

COPRINUS Pers.

This genus has but few species, so far as now known, and these are quite characteristic. Belonging, as it does, to the black-spored group, the gills are quickly coated with an abundance of jet-black spores. The gills are membranous at first, but quickly deliquesce into a fluid which becomes black because of the abundance of spores. The plants are commonly found on lawns, in flower beds, or on decaying stumps. They spring up very quickly during the night, and the sun's rays cause them to disappear. The plants vary much in size, some being very fragile, others firmer. Their delicate texture makes them all the more desirable for food.

Coprinus comatus Fr. Shaggy Mane. (Plate XXVI, Bull. No. 3.) The large, distinct, "shaggy" appearance of the cap of this species makes it especially noticeable. It is more abundant in late summer, but is occasionally found in June and July. The cap is larger, and the flesh is firmer in substance, than in other species of this genus. The cap is at first bell-shaped, expanding as it matures, until the margin finally becomes uprolled and more or less torn and split. The gills are very broad; white at first, they soon become tinged with pink, and finally become deep purple and dissolve into an ink-like substance. The stems are occasionally ten inches long and over a half-inch thick, but these are on plants growing in exceptionally rich soil. Ordinarily the

plants are smaller. The stems are hollow, and the ring is quite firm and occurs near the base of the stem. Atkinson, in his "Studies of American Fungi," gives an excellent and thorough description of this species, with splendid illustrations of the plants in all stages of their development.

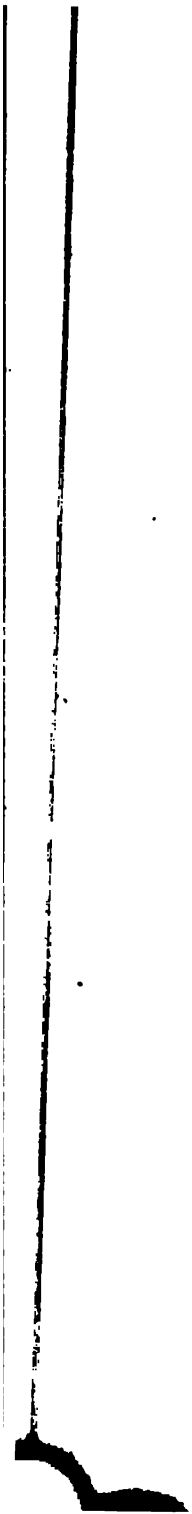
Coprinus atramentarius (Bull.) Fr. Ink-cap. This plant is similar in its habitat to *C. comatus*, and sometimes the plants may be found growing side by side. The writer has found both along a shaded bank where ashes had been dumped. They also occur abundantly on very rotten stumps. The caps of this species are smaller and shorter than those of the shaggy mane, and they are usually entirely smooth, but are covered sometimes with delicate white fibrils or coarser scales. The surface of the cap is distinctly marked with fine lines which radiate from the center to the margin. The ring in this species is quite fragile and disappears quickly after the margin of the cap separates from the stem.

Coprinus micaceus (Bull.) Fr. Glistening Coprinus. (Plate XXVIII.) The cap of this fungus is coated with minute scales which glisten in the sunlight like particles of mica. The plant is found frequently during the spring and early summer around bases of trees or decayed stumps on lawns. It is seldom found as an isolated specimen, but grows in dense groups. In matured plants, the cap seldom has a diameter of over an inch and a half. In substance the cap and gills are much thinner than those of either the shaggy mane or the ink-cap. During a dry season the plants retain rather a firm texture, but in moist weather it shows the same character of quickly dissolving into an inky substance that is shown by other members of the family. The writer has gathered and eaten large quantities of this species, and has found the quality superior to any others of the family.



Part III

List of Species of Fleshy and Woody Fungi Reported since July, 1905



AGARICACEÆ Fries.

AMANITA Pers.

- Amanita abrupta** Pk. (abrupt).
Mansfield, July (479).*
- Amanita cothurnata** Atk. (booted).
Mansfield, July (378).
- Amanita flavo-rubescens** Atk. (reddish-yellow).
South Windsor, *Hanmer*.
- Amanita Frostiana** Pk., var. *pallida* Pk. (pale).
Redding, *Earle* (1111).
- Amanita mappa** Fr. (*mappa*, a napkin).
Mansfield, July (376).
- Amanita solitaria** Bull. (growing alone).
East Hartford, *Hanmer*; Redding, *Earle* (1046).
- Amanita spreta** Pk. (despised).
Mansfield, July, *Dr. C. Thom*.

AMANITOPSIS Roz.

- Amanitopsis lepidota** Earle (scaly).
Redding, *Earle* (926).

TRICHOLOMA Fr.

- Tricholoma saponaceum** Fr. (soapy).
Danielson, *Miss E. B. Scarborough*.

COLLYBIA Fr.

- Collybia tuberosa** Bull. (tuberous).
Mansfield, Aug. (390).

MYCENA Fr.

- Mycena sub-incarnata** Pk. (almost flesh-colored).
Mansfield, Aug. (440).

* Numbers in parentheses accompanying notices of plants collected in Mansfield refer to the numbers of specimens in the herbarium of fungi in Connecticut Agricultural College; those accompanying notices of plants collected by Earle refer to the numbers of specimens in the herbarium of fungi at Bronx Park.

Mycena lesiana Berk. (Lea).

Mansfield, Aug. (470).

LACTARIUS Fr.

Lactarius involutus Sop. (inrolled).

Rainbow, *Hanmer*.

RUSSULA Pers.

Russula aeruginescens Pk. (*ærugeo*, rust of copper).

Redding, *Earle* (1211).

Russula albella Pk. (whitish).

Redding, *Earle* (1207).

Russula alutacea Fr. (leathery).

Mansfield, Aug. (443).

Russula decolorans Fr. (*decoloro*, to deprive of the natural color).

Redding, *Earle* (537, 1019); Mansfield, Aug. (470).

Russula fragilis Fr. (fragile).

Redding, *Earle* (670).

Russula integra Fr. (entire).

Redding, *Earle* (412).

Russula Mariae Pk.

Redding, *Earle* (347).

Russula nigricans Bull. (blackish).

Rainbow, *Hanmer*.

Russula olivacea Fr. (olivaceous).

Redding, *Earle* (418).

Russula pectinata Fr. (*pecten*, a comb).

Redding, *Earle* (349).

Russula rosacea Fr. (*rosa*, a rose).

Redding, *Earle* (1390).

PLEUROTUS Fr.

Pleurotus dryinus Pers. (*δρῦς*, oak).

Rainbow, *Hanmer*.

HYGROPHORUS Fr.

Hygrophorus chrysodon Fr. (golden-toothed).

Rainbow, *Hanmer*.

CANTHARELLUS Adanson.

Cantharellus aurantiacus Fr. (orange-yellow).

East Hartford, *Hanmer*; Mansfield, Aug. (427).

OMPHALIA Fr.

Omphalia campanella Balsch, var. *sparsa* Pk. (scattered).

East Hartford, *Hanmer*.

Omphalia scabriuscula Pk. (somewhat rough).

Mansfield, June (52).*

CLITOCYBE Fr.

Clitocybe adirondackensis Pk.

East Hartford, *Hanmer*.

LENTINUS Fr.

Lentinus cochleatus Fr. (*cochlea*, a snail-shell).

Mansfield, Aug. (430).

Lentinus ursinus Fr. (*ursus*, a bear).

Mansfield, Aug. (471).

INOCYBE Fr.

Inocybe floccosa Berk. (*floccus*, a lock of wool).

Redding, *Earle* (1034).

Inocybe rimosa Bull. (*rima*, a crack).

Redding, *Earle* (370, 653).

FLAMMULA Fr.

Flammula polychroa Berk. (many-colored).

East Hartford, *Hanmer*.

PLUTEUS Fr.

Pluteus granularis Pk. (sprinkled with grains).

Mansfield, Aug. (472).

Pluteus salicinus Pers. (*salix*, willow).

Mansfield, Aug. (433).

Pluteus longistriatus Pk. (marked with long striæ).

Redding, *Earle* (524).

Pluteus tomentosulus Pk. (somewhat woolly).

Mansfield, Aug. (475).

* See note on page 22.

CORTINARIUS Fr.

Cortinarius flavifolius Pk. (yellow-leaved).

Ledyard, *Hanmer*.

Cortinarius obliquus Pk. (oblique).

Ledyard, *Hanmer*.

Cortinarius torvus Fr. (savage).

East Hartford, South Windsor, *Hanmer*.

Cortinarius vernalis Pk. (*ver*, spring).

Mansfield, May (443).

PHOLIOTA Fr.

Pholiota adiposa Fr. (*adeps*, fat).

East Hartford, South Windsor, *Hanmer*.

CLITOPILUS Fr.

Clitopilus prunulus Scop. (*prunus*, plum).

Redding, *Earle* (1164).

AGARICUS Linn.

Agaricus campestris L. (*campus*, a field), var. **praticola** Vitt.
(inhabitant of meadows).

Mansfield, July (441).

Agaricus campestris, var. **hortensis** Cke. (belonging to a garden).

Greenhouse, East Hartford, *Hanmer*.

Agaricus campestris, var. **villaticus** Brond. (*villa*, a farmhouse).

New Britain, *Hanmer*.

HYPHOLOMA Fr.

Hypholoma subaquilum Banning (somewhat dark-colored).

Mansfield, Sept. (448).

Hypholoma hymenoccephalum Pk. (*ὑμήν*, membrane; *κεφαλή*, head).

South Windsor, *Hanmer*.

POLYPORACEAE Fr.**POLYPORUS Fr.**

Polyporus Spraguei B. & C.

Bolton, *Hanmer*.

Polyporus perplexus Pk. (confused).

East Hartford, *Hanmer*.

Polyporus poripes Fr. (having a porous stem).

Warehouse Point, *Hanmer*.

Polyporus arcularius (Batsch) Fr. (*arcularius*, one who makes little boxes).

East Hartford, *Hanmer*.

Polyporus fissus Berk. (cleft).

Manchester, *Hanmer*.

Polyporus fumosus Fr. (smoky).

South Windsor, *Hanmer*.

MUCRONOPORUS.

Mucronoporus Everhartii Ell. & Gal. *Pyropolyporus Everhartii* Ell. & Gal.

HYDNACEAE Fr.**PHLEBIA Fr.**

Phlebia radiata Fr. (*radius*, a spoke or ray).

East Hartford, *Hanmer*.



General Index

- Agaricaceae, 9, 29, 59.
Agaricus, 26, 51, 62.
Amanita, 11, 31, 59; pl. i.
Amanitopsis, 12, 32, 59; pl. ii.
Armillaria, 35.
Cantharellus, 20, 45, 61; pl. xix.
Clitocybe, 21, 46, 61.
Clitopilus, 25, 50, 62.
Collybia, 14, 37, 59; pls. vii-ix.
Coprinus, 27, 54; pl. xxviii.
Cortinarius, 23, 47, 62; pls. xxi, xxii.
Entoloma, 25.
Flammula, 24, 61.
Galera, 25.
Hydnaceae, 63.
Hygrophorus, 19, 44, 60; pl. xviii.
Hypholoma, 27, 52, 62; pl. xxvii.
Inocybe, 24, 61.
Lactarius, 15, 40, 60; pls. xii-xiv.
Lentinus, 22, 61; pl. xx.
Lenzites, 22.
Lepiota, 12, 33; pl. iii.
Marasmius, 13, 36; pls. iv-vi.
Mycena, 15, 39, 59; pls. x, xi.
Mucronoporus, 63.
Omphalia, 21, 22, 61.
Panaeolus, 27.
Panus, 22.
Paxillus, 23.
Phlebia, 63.
Pholiota, 24, 48, 62; pl. xxiii.
Pleurotus, 19, 43, 60.
Pluteus, 25, 49, 61; pls. xxiv-xxvi.
Polyporaceae, 63.
Polyporus, 63.
Russula, 17, 42, 60; pls. xv-xvii.
Stropharia, 26.
Tricholoma, 14, 36, 59.



Index to Species

- abortivus** (*Clitopilus*), 26.
abrupta (*Amanita*), 12, 59.
abruptus (*Agaricus*), 26.
acervata (*Collybia*), 14.
adiposa (*Pholiota*), 24, 62.
adirondackensis (*Clitocybe*), 21, 61.
admirabilis (*Pluteus*), 25.
adusta (*Russula*), 18.
aeruginescens (*Russula*), 17.
albella (*Russula*), 18, 60.
albo-flavidum (*Tricholoma*), 14.
album (*Tricholoma*), 14.
alnicola (*Flammula*), 24.
alutacea (*Russula*), 19, 42, 60.
americana (*Lepiota*), 13, 34.
amethystina (*Clitocybe*), 21.
appendiculatum (*Hypholoma*), 27, 53; pl. xxvii.
aquifluus (*Lactarius*), 15.
arcularius (*Polyporus*), 63.
armillatus (*Cortinarius*), 23.
arvensis (*Agaricus*), 26.
asperula (*Lepiota*), 13.
atramentarius (*Coprinus*), 27, 55.
atropurpurea (*Russula*), 18.
atro-tomentosus (*Paxillus*), 23.
aurantiacus (*Cantharellus*), 21, 45, 61.
aurantiacus (*Paxillus*), 23.
aurata (*Russula*), 19.
betulina (*Lenzites*), 22.
bisporigera (*Amanita*), 11.
blennius (*Lactarius*), 16.
bolaris (*Cortinarius*), 23.
brevipes (*Cantharellus*), 20.
brevipes (*Russula*), 18.
butyracea (*Collybia*), 15; pl. viii.
Cæsarea (*Amanita*), 11, 31.
calophyllus (*Hygrophorus*), 20.
campanella (*Omphalia*), 21.
campanella, var. *sparsa* (*Omphalia*), 21, 61.
campanulatus (*Panaeolus*), 27.
campestris (*Agaricus*), 26, 51, 62.
camphoratus (*Lactarius*), 16.
candida (*Amanita*), 12.
caperata (*Pholiota*), 24, 49; pl. xxiii.
caprinus (*Hygrophorus*), 20.
ceraceus (*Hygrophorus*), 20.
cervinus (*Pluteus*), 25, 49; pl. xxv.
chelidonium (*Lactarius*), 17.
chlorophanus (*Hygrophorus*), 20.
chrysodon (*Hygrophorus*), 20, 60.
chrysopeplus (*Lentinus*), 22.
chrysorrheus (*Lactarius*), 16.
cibarius (*Cantharellus*), 21, 45.
cinnabarinus (*Cantharellus*), 20.
cinnabarinus (*Cortinarius*), 23.
cinnamomeus (*Cortinarius*), 23, 47.
citrina (*Russula*), 18.
clavipes (*Clitocybe*), 21.
clypeolaria (*Lepiota*), 13.
coccineus (*Hygrophorus*), 20.
cochleatus (*Lentinus*), 22, 61.
cohaerens (*Marasmius*), 13.
collinitus (*Cortinarius*), 23, 48.
comatus (*Coprinus*), 27, 54.
comptulus (*Agaricus*), 26.
confluens (*Collybia*), 14.
conicus (*Hygrophorus*), 20.
corrugatus (*Cortinarius*), 23; pl. xxi.
corrugis (*Lactarius*), 17, 41.
cothurnata (*Amanita*), 12, 59.
cristata (*Lepiota*), 13.
curvipes (*Pholiota*), 24.

- cyanothrix (*Mycena*), 15.
 deceptivus (*Lactarius*), 16, 41.
 decolorans (*Russula*), 19, 60; pl.
 xvii.
 deliciosus (*Lactarius*), 17, 42.
 depallens (*Russula*), 18.
 dichotomus (*Cantharellus*), 20.
 dryinus (*Pleurotus*), 19, 60.
 dryophila (*Collybia*), 15.
 elongatipes (*Marasmius*), 13.
 emetica (*Russula*), 18.
 epipterygia (*Mycena*), 15.
 equestre (*Tricholoma*), 14.
 erubescens (*Hygrophorus*), 19.
 esculenta (*Collybia*), 14, 39.
 Everhartii (*Mucronoporus*), 63.
 farinaceus (*Panus*), 22.
 farinosa (*Amanitopsis*), 12.
 farinosa (*Lepiota*), 13.
 fasciculare (*Hypholoma*), 27.
 fissus (*Polyporus*), 63.
 flaccida (*Lenzites*), 22.
 flavida (*Flammula*), 24.
 flavida (*Russula*), 18.
 flavifolius (*Cortinarius*), 23, 62.
 flavo-conia (*Amanita*), 11.
 flavo-rubescens (*Amanita*), 12, 59.
 floccosa (*Inocybe*), 24, 61.
 floccosus (*Cantharellus*), 20; pl.
 xix.
 foetens (*Russula*), 17.
 fragilis (*Russula*), 18, 60.
 Frostiana (*Amanita*), 11, 59.
 fuliginosus (*Lactarius*), 16.
 fumosus (*Lactarius*), 17.
 fumosus (*Polyporus*), 63.
 furcata (*Russula*), 17.
 fusus (*Flammula*), 24.
 galericulata (*Mycena*), 15, 39.
 grande (*Entoloma*), 25.
 granularis (*Pluteus*), 25, 61; pl.
 xxiv.
 granulosa (*Lepiota*), 13.
 Grayanum (*Entoloma*), 25.
 griseus (*Lactarius*), 17.
 haematopoda (*Mycena*), 15; pl. x.
 hybrida (*Flammula*), 24.
 hygrophoroides (*Lactarius*), 17.
 hymenoccephalum (*Hypholoma*),
 27.
 hypnorum (*Galera*), 25.
 illinita (*Lepiota*), 12.
 illudens (*Clitocybe*), 21.
 indigo (*Lactarius*), 17.
 infundibuliformis (*Cantharellus*),
 20.
 infundibuliformis (*Clitocybe*), 21.
 integra (*Russula*), 19, 60.
 involutus (*Lactarius*), 16, 60; pl.
 xiv.
 involutus (*Paxillus*), 23.
 iodes (*Cortinarius*), 23.
 laccata (*Clitocybe*), 21, 46.
 lacerata (*Collybia*), 14.
 lanuginosa (*Inocybe*), 24.
 Lecomtei (*Lentinus*), 22.
 lepida (*Russula*), 18.
 lepideus (*Lentinus*), 22.
 lepidota (*Amanitopsis*), 12, 59.
 lesiana (*Mycena*), 15, 60; pl. xi.
 lignatilis (*Pleurotus*), 19.
 lignyotus (*Lactarius*), 17.
 longistriatus (*Pluteus*), 25, 61.
 luteolus (*Lactarius*), 17.
 lutescens (*Cantharellus*), 21.
 maculata (*Collybia*), 15.
 magna (*Flammula*), 24.
 mappa (*Amanita*), 11, 59.
 Mariae (*Russula*), 19, 60.
 mellea (*Armillaria*), 35.
 metulaespora (*Lepiota*), 13.
 micaceus (*Coprinus*), 27, 55; pl.
 xxviii.
 micropus (*Clitopilus*), 26.
 miniatus (*Hygrophorus*), 20, 44;
 pl. xviii.
 muscaria (*Amanita*), 11.
 naucinoides (*Lepiota*), 12, 34; pl.
 iii.
 nigricans (*Russula*), 18, 60.
 nitidus (*Hygrophorus*), 20.
 noveboracensis (*Clitopilus*), 25.
 obliquus (*Cortinarius*), 24, 62.
 ochro-purpurea (*Clitocybe*), 21.

- odora* (Clitocybe), 21, 46.
olivacea (Russula), 18, 60.
orcella (Clitopilus), 26, 50.
oreades (Marasmius), 13, 36; pl. iv.
ostreatus (Pleurotus), 19, 43.
pallidus (Lactarius), 17.
panuoides (Paxillus), 23.
pectinata (Russula), 17, 60.
pelianthina (Mycena), 15.
pergamenus (Lactarius), 16.
perplexus (Polyporus), 63.
personatum (Tricholoma), 14, 36.
petaloides (Pleurotus), 19.
phalloides (Amanita), 11.
piperatus (Lactarius), 16, 41.
placomyces (Agaricus), 26.
platyphylla (Collybia), 14, 38; pl. vii.
plicatilis (Coprinus), 27.
polychroa (Flammula), 24, 61.
popinalia (Clitopilus), 26.
poripes (Polyporus), 63.
portentosum (Tricholoma), 14.
praecox (Pholiota), 24, 48.
pratensis (Hygrophorus), 20, 44.
procera (Lepiota), 13, 33.
prunulus (Clitopilus), 25, 62.
puniceus (Hygrophorus), 20.
quietus (Lactarius), 16.
radiata (Phlebia), 63.
radicata (Collybia), 14, 38.
retiphyllus (Marasmius), 13.
retirugis (Panaeolus), 27.
rhodopolium (Entoloma), 25.
rimosa (Inocybe), 24, 61.
Rodmani (Agaricus), 26.
rosacea (Russula), 18, 60.
roseipes (Russula), 19.
rosellus (Cantharellus), 20.
rotula (Marasmius), 13; pl. v.
rubescens (Amanita), 12, 31; pl. i.
rudis (Panus), 22.
rugeocephalum (Hypholoma), 27.
rutilans (Tricholoma), 14.
salicinus (Panus), 22.
salicinus (Pluteus), 25, 61.
sanguinea (Russula), 18; pl. xv.
sapidus (Pleurotus), 19.
saponaceum (Tricholoma), 14, 59.
scabriuscula (Omphalia), 21, 61.
scorodonius (Marasmius), 13.
sejunctum (Tricholoma), 14, 37.
semiglobata (Stropharia), 26.
semihirtipes (Marasmius), 13; pl. vi.
sepiaria (Lenzites), 22.
serotinus (Pleurotus), 19.
solidipes (Panaeolus), 27.
solitaria (Amanita), 12.
Spraguei (Polyporus), 63.
spretta (Amanita), 11, 59.
squarrosa (Pholiota), 24.
squarrosoides (Pholiota), 24.
stercoraria (Stropharia), 26.
stipticus (Panus), 22.
strangulata (Amanitopsis), 12.
strictipes (Collybia), 15.
strictius (Entoloma), 25.
strobiliformis (Amanita), 12, 32.
subaquilum (Hypholoma), 27, 62.
subdulcis (Lactarius), 17.
sub-incarnata (Mycena), 15, 59.
sublateritium (Hypholoma), 27, 53.
subpurpureus (Lactarius), 17.
tardus (Clitopilus), 26.
tenera (Galera), 25.
terreum (Tricholoma), 14.
theiogalus (Lactarius), 16.
tigrinus (Lentinus), 22.
tomentosulus (Pluteus), 25, 61; pl. xxvi.
torminosus (Lactarius), 16; pl. xii.
torulosus (Panus), 22.
torvus (Cortinarius), 23, 62.
transmutans (Tricholoma), 14.
trivialis (Lactarius), 16.
trullissata (Clitocybe), 21.
tuberosa (Collybia), 15, 59.
turbinatus (Cortinarius), 23.
ulmarius (Pleurotus), 19, 44.

- umbrosus (*Pluteus*), 25.
unitinctus (*Clitopilus*), 26.
ursinus (*Lentinus*), 22, 61; pl. xx.
vaginata (*Amanitopsis*), 12, 32;
 pl. ii.
varicosus (*Marasmius*), 13.
velatipes (*Amanita*), 12.
vellereus (*Lactarius*), 16; pl. xiii.
velutipes (*Collybia*), 14, 38.
verna (*Amanita*), 11.
vernalis (*Cortinarius*), 23, 62.
violaceus (*Cortinarius*), 24, 47;
 pl. xxii.
virescens (*Russula*), 18, 43; pl.
 xvi.
virgineus (*Hygrophorus*), 20.
volemus (*Lactarius*), 17, 40.
volvata (*Amanitopsis*), 12.
vulgaris (*Mycena*), 15.
vulpinus (*Lentinus*), 22.
zonata (*Collybia*), 15; pl. ix.



